

### **REMARKS**

Applicant has carefully reviewed and considered the Office Action mailed on October 27, 2003, and the references cited therewith. By this amendment, applicant has amended claims 1-5, 13-15, 17, 19 and 24, cancelled claim 6, and added new claims 25-36. The specification was amended to add a new description for Figure 4. Figure 4 was added to the drawings. No new matter has been added by this amendment.

#### **§37 CFR 1.83(a) Objection of the Claims**

**Objection:** The Examiner objected to the drawings under 37 CFR 1.83(a). According to the Examiner, the drawings must show every feature of the invention specified in the claims. The features of the receipt were not shown.

**Response:** By this amendment, Figure 4 was added to the drawings. No new subject matter was added. A receipt including identifying information and thumbnails of the images is shown in added Figure 4. No new matter is added in Figure 4. Support is found for Figure 4 in paragraph [0021] on page 5 of the specification. The specification was also amended to add the description of Figure 4 to the Brief Description of the Drawings portion of the specification.

#### **Lexicography**

**Objection:** Applicant uses the phrase “performing a point-of-sale transaction” and as set forth in applicant’s specification it is not limited to utilizing a point-of-sale terminal. Specification, pg. 34[0034].

**Response:** This phrase has been removed. Applicant requests that the Examiner apply the normal meaning of terms when examining the application.

§112 Rejection of the Claims

**A. Rejection:** Claims 15-17 were rejected under 35 USC § 112, 6th paragraph. Although Applicant(s) use “means for” in the claim(s), it is the Examiner’s position that the “means for” phrase(s) do not invoke 35 USC 112, 6th paragraph.

**B. Response:** Applicant used the means for language to invoke paragraph 6 of 35 USC 112. Applicant requests that the Examiner examine the claims accordingly.

§102 Rejection of the Claims

**A. Rejection:** Claims 1-3, 8-10, 13-16, 18 and 24 were rejected under 35 USC § 102(a) as being anticipated by www.photonet.com (archived March 2, 2000).

**B. Response:** Anticipation requires the disclosure in a single prior art reference of each and every element of the claim under consideration. Applicant respectfully submits that the Office Action fails to make out a *prima facie* case of anticipation. Amended independent claim 1 now recites “...printing a sales receipt for the transaction that includes a thumbnail of the at least one digital image to confirm storage of the at least one digital image...” The www.photonet.com reference does not teach printing a receipt much less a receipt that includes thumbnails of the images stored. The www.photonet.com reference also fails to teach confirmation of the storage of a digital image, much less using the receipt as confirmation that the image is stored. Accordingly, claim 1 as amended, now overcomes the rejection under 35 USC § 102(b) as being anticipated by the www.photonet.com reference (archived March 2, 2000).

Claims 2, 3 and 8-10 depend, either directly or indirectly, from claim 1 and include the limitations of claim 1 by their dependency. As a result, each of these claims now overcomes the rejection under 35 USC § 102(b) as being anticipated by the www.photonet.com reference (archived March 2, 2000).

Claim 13, as now amended, recites “...removing memory from the imaging device; inserting the memory from the imaging device into a memory reader associated with a transaction machine...” wherein “...the transaction machine adapted for use by a plurality of

customers.” The [www.photonet.com](http://www.photonet.com) reference teaches the use of private computers used to upload images from a digital camera. A transaction machine adapted for use by a plurality of customers differs from a private computer. A transaction machine allows As mentioned in the, “...photo-taking capability is increased without...having access to a storage device such as a personal or notebook computer.” (see Paragraph [0014] of the specification). The [www.photonet.com](http://www.photonet.com) reference fails to teach a transaction machine. The [www.photonet.com](http://www.photonet.com) reference also fails to teach inserting memory from the imaging device into a memory reader associated with a transaction machine. Accordingly, claim 13 as amended, now overcomes the rejection under 35 USC § 102(b) as being anticipated by the [www.photonet.com](http://www.photonet.com) reference (archived March 2, 2000).

Claim 14 depends from claim 13 and adds printing a sales receipt having including a thumbnail of the at least one image. The rejection of claim 14 is also overcome since the [www.photonet.com](http://www.photonet.com) reference (archived March 2, 2000) fails to teach the elements of claim 13 (which are included in claim 14 by its dependency on claim 13) as well as the printing the receipt with thumbnails.

Claim 15 now recites “...means for printing sales receipts for the transactions that include information identifying the stored images, the identifying information including thumbnail images of the stored digital images.” The [www.photonet.com](http://www.photonet.com) reference does not teach means for printing a receipt much less means for printing a receipt that includes thumbnails of the images stored. Accordingly, claim 15 as amended, now overcomes the rejection under 35 USC § 102(b) as being anticipated by the [www.photonet.com](http://www.photonet.com) reference (archived March 2, 2000).

Claims 16 and 18 depend directly from claim 15 and include the limitations of claim 15 by their dependency. As a result, each of these claims now overcomes the rejection under 35 USC § 102(b) as being anticipated by the [www.photonet.com](http://www.photonet.com) reference (archived March 2, 2000).

Claim 24 now recites “An article for a transaction machine, the transaction machine adapted for use by a plurality of customers, the transaction machine having a processor and an interface, the article comprising: computer memory linked to the processor, the interface communicatively coupled to the computer memory and the interface adapted to receive digital images from the plurality of customers...” As mentioned previously, the [www.photonet.com](http://www.photonet.com)

reference fails to teach a transaction machine adapted for use by a plurality of customers, or an interface communicatively coupled to the computer memory and adapted to receive digital images from the plurality of customers. Accordingly, claim 24 as amended, now overcomes the rejection under 35 USC § 102(b) as being anticipated by the [www.photonet.com](http://www.photonet.com) reference (archived March 2, 2000).

**C. Rejection:** Claims 1-3, 7-11, 13-16, 18 and 24 were rejected under 35 USC § 102(e) as being anticipated by Shiota, et al. (US 2002/0032909 A1).

**D. Response:** Anticipation requires the disclosure in a single prior art reference of each and every element of the claim under consideration. Applicant respectfully submits that the Office Action fails to make out a *prima facie* case of anticipation. Amended independent claim 1 now recites "...printing a sales receipt for the transaction that includes a thumbnail of the at least one digital image to confirm storage of the at least one digital image..." The Shiota et al. reference (US 2002/0032909 A1) does not teach printing a receipt much less a receipt that includes thumbnails of the images stored. The Shiota et al. reference (US 2002/0032909 A1) also fails to teach confirmation of the storage of a digital image, much less using the receipt as confirmation that the image is stored. Accordingly, claim 1 as amended, now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Shiota et al. reference (US 2002/0032909 A1).

Claims 2, 3 and 8-11 depend, either directly or indirectly, from claim 1 and include the limitations of claim 1 by their dependency. As a result, each of these claims now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Shiota et al. reference (US 2002/0032909 A1).

Claim 13, as now amended, recites "...removing memory from the imaging device; inserting the memory from the imaging device into a memory reader associated with a transaction machine..." wherein "...the transaction machine adapted for use by a plurality of customers." The Shiota et al. reference (US 2002/0032909 A1) fails to teach inserting memory from the imaging device into a memory reader associated with a transaction machine. The Shiota et al. reference (US 2002/0032909 A1) teaches interfaces to digital cameras (see



paragraph [0035], page 3 of the publication, and fails to teach a digital camera or imaging device with removable memory. Therefore the elements discussed above are also not taught.

Accordingly, claim 13 as amended, now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Shiota et al. reference (US 2002/0032909 A1).

Claim 14 depends from claim 13 and adds printing a sales receipt having including a thumbnail of the at least one image. The rejection of claim 14 is also overcome since the Shiota et al. reference (US 2002/0032909 A1) fails to teach the elements of claim 13 (which are included in claim 14 by its dependency on claim 13) as well as the printing the receipt with thumbnails.

Claim 15 now recites "...means for printing sales receipts for the transactions that include information identifying the stored images, the identifying information including thumbnail images of the stored digital images." The Shiota et al. reference (US 2002/0032909 A1) does not teach means for printing a receipt much less means for printing a receipt that includes thumbnails of the images stored. Accordingly, claim 15 as amended, now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Shiota et al. reference (US 2002/0032909 A1).

Claims 16 and 18 depend directly from claim 15 and include the limitations of claim 15 by their dependency. As a result, each of these claims now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Shiota et al. reference (US 2002/0032909 A1).

Claim 24 now recites "...a program encoded in the computer memory, the program, when executed, instructing the processor to receive digital images via the interface, determine a price for storing the digital images at a remote site, process payment information, [and] send paid-for digital images to the remote site, and to receive confirmation of storage of the paid-for digital images from the remote site."

As mentioned previously, the Shiota et al. reference (US 2002/0032909 A1) fails to teach a transaction machine that includes a program that receives confirmation of storage at a remote site. Accordingly, claim 24 as amended, now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Shiota et al. reference (US 2002/0032909 A1).

§103 Rejection of the Claims

**A. Rejection:** Claims 1-3, 7-11, 13-16, 18, 19-21 and 24 were rejected under 35 USC § 102(e) as anticipated by or, in the alternative, under 35 USC § 103(a) as obvious over Bidun (WO 200163518 A2).

Claims 19-21 were rejected for the same reasons set forth in the method claim above.

**B. Response:** Anticipation requires the disclosure in a single prior art reference of each and every element of the claim under consideration. Applicant respectfully submits that the Office Action fails to make out a *prima facie* case of anticipation. Amended independent claim 1 now recites "...printing a sales receipt for the transaction that includes a thumbnail of the at least one digital image to confirm storage of the at least one digital image..." The Bidun (WO 200163518 A2) reference does not teach printing a receipt much less a receipt that includes thumbnails of the images stored. The Bidun (WO 200163518 A2) reference also fails to teach confirmation of the storage of a digital image, much less using the receipt as confirmation that the image is stored. Accordingly, claim 1 as amended, now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Bidun (WO 200163518 A2) reference.

Claims 2, 3 and 8-11 depend, either directly or indirectly, from claim 1 and include the limitations of claim 1 by their dependency. As a result, each of these claims now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Bidun (WO 200163518 A2) reference.

Claim 13, as now amended, recites "...confirming storage of the at least one digital image at the remote site." The Bidun (WO 200163518 A2) reference fails to teach confirming storage of the at least one digital image at the remote site. Accordingly, claim 13 as amended, now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Bidun (WO 200163518 A2) reference.

Claim 14 depends from claim 13 and adds printing a sales receipt having including a thumbnail of the at least one image. The rejection of claim 14 is also overcome since the Bidun

(WO 200163518 A2) reference fails to teach the elements of claim 13 (which are included in claim 14 by its dependency on claim 13) as well as the printing the receipt with thumbnails.

Claim 15 now recites "...means for printing sales receipts for the transactions that include information identifying the stored images, the identifying information including thumbnail images of the stored digital images." The Bidun (WO 200163518 A2) reference does not teach means for printing a receipt much less means for printing a receipt that includes thumbnails of the images stored. Accordingly, claim 15 as amended, now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Bidun (WO 200163518 A2) reference.

Claims 16 and 18 depend directly from claim 15 and include the limitations of claim 15 by their dependency. As a result, each of these claims now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Bidun (WO 200163518 A2) reference.

Claim 24 now recites "...a program encoded in the computer memory, the program, when executed, instructing the processor to receive digital images via the interface, determine a price for storing the digital images at a remote site, process payment information, [and] send paid-for digital images to the remote site, and to receive confirmation of storage of the paid-for digital images from the remote site."

As mentioned previously, the Bidun (WO 200163518 A2) reference fails to teach a transaction machine that includes a program that receives confirmation of storage at a remote site. Accordingly, claim 24 as amended, now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Bidun (WO 200163518 A2) reference.

Claim 19 recites "...a processor responsive to the card reader and programmed to perform a point-of-sale financial transaction for sending digital images to a remote storage site, the processor confirming storage of digital images at the remote storage site in response to confirmation sent from the remote storage site." The Bidun (WO 200163518 A2) reference fails to teach a processor confirming storage of digital images at the remote storage site in response to confirmation sent from the remote storage site. Accordingly, claim 24 as amended, now overcomes the rejection under 35 USC § 102(e) as being anticipated by the Bidun (WO 200163518 A2) reference.

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

The rejection of each of the claims 1-3, 7-11, 13-16, 18, 19-21 and 24 are now improper since the Examiner has failed to make out a *prima facie* case of obviousness. As pointed out in the above paragraphs, the Bidun reference falls short of the invention as claimed.. A *prima facie* case of obviousness is not made out since the prior art reference does not teach or suggest all the claim limitations.

The Examiner rejected claims 1-3, 7-11, 13-16, 18, 19-21 and 24 based on the Bidun reference. Applicant respectfully traverses the single reference rejection under 35 U.S.C. § 103(a) since not all of the recited elements of the claims are found the Bidun reference. Since all the elements of the claim are not found in the reference, Applicant assumes that the Examiner would have to take official notice of the missing elements. Applicant respectfully objects to the taking of official notice with a single reference obviousness rejection. If the Examiner continues to maintain this rejection, Applicant respectfully traverses the assertion of Official Notice and requests that the Examiner cite references in support of the rejection, pursuant to *M.P.E.P.* § 2144.03.

**C. Rejection:** Claims 4, 5, 17 and 22 were rejected under 35 USC § 103(a) as being unpatentable over Shiota et al. or Bidun in view of [www.telepix.com](http://www.telepix.com) and further in view of Michael Meyer, Dialing for Dmarks: [Atlantic Edition] Newsweek, January 12, 1998, jpg. 8 and Chet Dembeck, A Technological Tale, Mom and Pops Splurge on '90s Gadgetry and Hope for a Storybook Ending, Washington Business Journal, August 17, 1998.

**D. Response:** Claims 4 and 5 depend from claim 1, either directly or indirectly.

Therefore each includes the recitation of claim 1 to has been amended to recite "...printing a sales receipt for the transaction that includes a thumbnail of the at least one digital image to confirm storage of the at least one digital image." No reference cited teaches a thumbnail of the stored image on the receipt. In addition, no reference cited uses such a receipt to confirm storage at the remote site. As a result, the Examiner has failed to make a *prima facie* case of obviousness since the combination of the references fails to teach or suggest all the claimed elements. As noted above, the prior art references must teach or suggest all the claim limitations.

The Examiner has also failed to make a *prima facie* case of obviousness since there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The examiner sets forth reasons for combining five references to yield applicants invention as now claimed. The reasons for combination are not set forth in the references and were not available to one of ordinary skill in the art at the time of the invention. It appears to applicant that the reasons set forth by the Examiner come from the Examiner. Applicant requests that the Examiner either point to the specific areas of the references where the reasons for the suggestion or motivation are set forth. In the alternative, applicant requests that the Examiner place an affidavit of personal knowledge in the file history indicating that the reasons set forth in the office action of October 27, 2003 were available to those of ordinary skill in the art.

Applicant can see many reasons not to produce such a receipt, including added cost and complexity of the transaction machine. Adding a printer to a transaction machine adds to the complexity of the transaction machine. Added complexity generally requires more maintenance to fix the printer. Adding a printer also requires frequent stocking of the media tray of the printer. In addition, printing such a receipt takes time. Customers, in this fast-paced world, do not like to wait. These are but a few of the reasons against providing a printer to print the claimed receipts.

It also seems that combining five references to yield applicant's invention is improper in that the Examiner appears to be using applicant's invention as a blueprint for the rejection. Monday morning quarterbacking is not allowed. For the above stated reasons, applicant respectfully submits that claims 4 and 5 are not obvious.

Claim 22 depends directly from claim 19 which recites "...a processor responsive to the card reader and programmed to perform a point-of-sale financial transaction for sending digital images to a remote storage site, the processor confirming storage of digital images at the remote storage site in response to confirmation sent from the remote storage site." It does not appear that any of the cited references teach a processor confirming storage of digital images at the remote storage site in response to confirmation sent from the remote storage site. Therefore, a combination of these references also does not teach this aspect. As a result, the combination of references falls short of teaching every element of claim 22. Accordingly, claim 22 is not obvious.

**E. Rejection:** Claims 6 and 23 were rejected under 35 USC § 103(a) as being unpatentable over Shiota et al. or Bidun in view of [www.telepix.com](http://www.telepix.com) and in view of Michael Meyer, Dialing for Dmarks: [Atlantic Edition] Newsweek, January 12, 1998, pg. 8 and Chet Dembeck, A Technological Tale, Mom and Pops Splurge on '90s Gadgetry and Hope for a Storybook Ending, Washington Business Journal, August 17, 1998 as applied to claims 1 and 4-5 and 19 and 22 above, and further in view of Bill Baird, The E-Marketer's Swipe File: Cutting-Edge Intelligence for the New Economy, Target Marketing, Vol. 23, No. 12, December 2000, pg. 20/Jill Welch, Craving the latest and the Greatest? Try the Advanced Photo System, Vol. 18, Issue 45, November 4, 1996, pg. 91/Perfect Prints, Time, November 3, 1997, pg. 75/Iomega and Lexmark Deliver Industry's First PC-Free Digital Photo Processing Solution, Business Wire October 6, 1998, pg. 1.

**F. Response:** Claim 6 has been cancelled in this application, thereby obviating the rejection. Claim 23 depends, indirectly, from claim 19 which recites "...a processor responsive to the card reader and programmed to perform a point-of-sale financial transaction for sending digital images to a remote storage site, the processor confirming storage of digital images at the remote storage site in response to confirmation sent from the remote storage site." It does not appear that any of the cited references teach a processor confirming storage of digital images at the remote storage site in response to confirmation sent from the remote storage site. Therefore, a combination of these references also does not teach this aspect. As a result, the combination of

references falls short of teaching every element of claim 23. Accordingly, claim 23 is not obvious.

**G. Rejection:** Claim 12 was rejected under 35 USC 103(a) as being unpatentable over Shiota, et al. or Bidun as applied to claims 1 and 11 above, and further in view of Eastman Kodak: Kodak to acquire 51% state in Picture Vision, M2 Presswire, February 13, 1998, pg. 1.

**H. Response:** Claim 12 depends from claim 1. Claim 1 recites "...recite "...printing a sales receipt for the transaction that includes a thumbnail of the at least one digital image to confirm storage of the at least one digital image." No reference cited teaches a thumbnail of the stored image on the receipt. In addition, no reference cited uses such a receipt to confirm storage at the remote site. The Examiner sets forth reasons for combining the third reference with Bidun and Shiota, et al. to yield applicants invention as now claimed. The reasons for combining the references do not appear to be set forth in the references. The reason for combination appears to come from the Examiner. Applicant disagrees with this approach and states for the record that it is improper.

Even so, the combination of Bidun, Shiota et al. and the Eastman Kodak article still fall short of teaching or suggesting each of the elements of the invention as now claimed in claim 23 and the claims from which it depends. Simply put, the combination of references falls short of the claimed combination. For example, the references fail to teach printing the sales receipt with thumbnails as confirmation of storage at a remote location. Accordingly, the combination falls short and the rejection under 35 USC 103(a) is improper.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6977 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 08-2025.

Respectfully submitted,

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

P.O. Box 2938

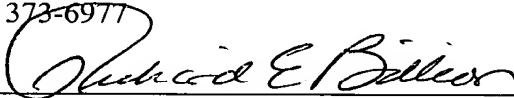
Minneapolis, MN 55402

(612) 373-6977

Date

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By



Richard E. Billion

Reg. No. 32,836

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Dawn M. Poole

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Dawn M. Poole



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(71) Applicant (for all designated States except US): WOW-  
POST.COM INC. [US/US]; 336 West 71st Street 1R, New  
York, NY 10023 (US).

(72) Inventor; and

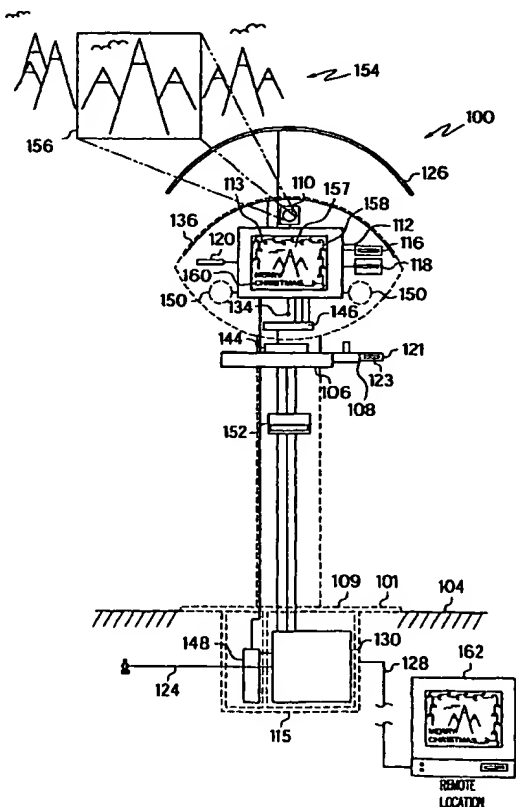
(75) Inventor/Applicant (for US only): BIDUN, Michael, L.  
[US/US]; 336 West 71st Street 1R, New York, NY 10023  
(US).

(74) Agents: WENTSLER, Stephen, S. et al.; Dinsmore &  
Shohl LLP, 1900 Chemed Center, 255 East Fifth Street,  
Cincinnati, OH 45202 (US).

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[Continued on next page]

(54) Title: KIOSK APPARATUS AND METHOD FOR GATHERING AND TRANSMITTING DATA



(57) Abstract: An apparatus and method for gathering and transmitting data to remote location. Initially, payment is introduced to the kiosk apparatus. Once approved, the kiosk records data, such as a digital image from a tourist location, or other point of interest with a digital capture device and then transmits the data to a remote location for later viewing. Alternatively, once payment is approved, the data is uploaded from a portable electronic device, such as a digital camera, to the kiosk apparatus and transmitted to the remote location.

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## KIOSK APPARATUS AND METHOD FOR GATHERING AND TRANSMITTING DATA

Michael L. Bidun

### TECHNICAL FIELD

This invention relates generally to data transmission, and more particularly to a multimedia kiosk vending device for obtaining a digital photo, video image or audio digital and uploading the information for simultaneous transmission to a remote location or for storage on a remote location for later retrieval via the Internet.

### BACKGROUND OF THE INVENTION

Conventional digital capture devices typically include a limited internal memory unit for storage of digital photos or videos. The compact nature of the device also generally limits the space allocated for internal memory. Once the stored data fills the allocated space, the digital information must be uploaded and erased or the entire memory unit must be replaced in order to store additional data. Unfortunately, uploading the stored information directly to a personal computer requires the availability of such a computer when using the capture device. It will be appreciated that it can be cumbersome and/or inconvenient to transport a computer for uploading files from the device.

Moreover, removing a filled memory unit from the device for later processing is inconvenient and can result in the loss of the memory unit and stored data. In addition, obtaining additional memory units to replace filled memory units requires the user to purchase and transport multiple memory units which may be cumbersome and expensive.

5        Digital cameras and other personal digital data acquisition devices, however, may be prohibitively expensive to acquire and/or impractical for ownership by the masses. It would be beneficial to have a pay-for-use kiosk apparatus at a location, such as a tourist location or other convenient locations, that can capture and transmit an image or series of images to any other desired location or recipient and that allows the image to be  
10    modified, customized, and enhanced. Such a kiosk apparatus would eliminate the need to purchase or rent an expensive camera and transport a camera, video equipment, film, memory and/or photos from the one location to another.

### SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to obviate problems and  
15    shortcomings of conventional devices used to obtain visual and/or audio data. More particularly, it is an object of the present invention to provide a multi-functional kiosk apparatus for gathering and/or transmitting data to a remote location.

It is another object of the invention to allow a user to free memory on a digital  
camera without loss of data and without the need for owning and transporting a computer  
20    or additional memory media.

Yet another object of the invention is to allow a user to take and send photographs

or videos without the need for owning and transporting a camera, camcorder and related devices.

Another object of the invention is to provide a pay-per-use kiosk for taking digital images, videos, and/or digital audio and transmitting them to a desired location and/or  
5 recipient.

Another object of the invention is to allow a user to view surrounding scenery without the need for owning and transporting a telescope or other image magnification device.

To achieve the foregoing and other objects and in accordance with the present  
10 invention, kiosk apparatus is provided. The kiosk apparatus may include a digital image device for gathering digital image data and/or a microphone for collecting digital audio. A vending apparatus may be provided for accepting payment. A processing unit may also be provided in communication with the vending apparatus and the digital image capture device and configured to receive the digital image data and detect the payment.

15 The kiosk apparatus of the present invention are advantageous in that they facilitate viewing visual data and/or gathering and transmitting visual and/or audio data to a remote location. Still other advantages of the present invention will become apparent to those skilled in the art from the following description wherein there are shown and described alternative exemplary embodiments of this invention. As will be realized, the  
20 invention is capable of other different, obvious aspects and embodiments, all without departing from the invention. Accordingly, the drawings and descriptions should be regarded as illustrative in nature and not as restrictive.

**BRIEF DESCRIPTION OF THE DRAWINGS**

While the specification concludes with claims particularly pointing out and distinctly claiming the present invention, it is believed the same will be better understood from the following description taken in conjunction with the accompanying drawings in which:

FIG. 1 is a front elevational view of a kiosk apparatus made in accordance with principles of the present invention;

FIG. 2 is a front view of another kiosk apparatus having a cart for mobility wherein the interior components are shown;

FIG. 3 is a front elevational view of another kiosk apparatus, and made according to the principles of the present invention, wherein the interior components are shown;

FIG. 4 is a rear elevational view of the kiosk apparatus of FIG. 3 wherein the interior components are shown;

FIG. 5 is a side elevational view of the kiosk apparatus of FIG. 3 wherein the interior components are shown;

FIG. 6 is a block diagram illustrating kiosk component connections to a central processing unit according to principles of the present invention;

FIG. 7 is a flow diagram illustrating alternative methods of using a kiosk apparatus of FIGS. 1-6 in accordance with the present invention;

FIG. 8 is a flow diagram illustrating a method of using a kiosk apparatus as a digital telescope;

FIG. 9 is a flow diagram illustrating a method of using a kiosk apparatus to capture a digital video;

5           FIG. 10 is a flow diagram illustrating a method of using a kiosk apparatus to capture a digital photo;

FIG. 11 is a flow diagram illustrating a method of using a kiosk apparatus to upload data;

10           FIG. 12 is a flow diagram illustrating a method of using a kiosk apparatus to video conference;

FIG. 13 is a flow diagram illustrating a method of using a kiosk apparatus to search for data;

FIG. 14 is a flow diagram illustrating a method of using a kiosk apparatus to send an e-mail with a stock card;

15           FIG. 15 is a flow diagram illustrating a method of providing a kiosk apparatus with payment; and

FIG. 16 is a flow diagram illustrating a method of using a kiosk apparatus to transfer data from a compact storage unit to a remote location.

### DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Turning now to the drawings in detail, wherein like numbers illustrate corresponding structure, a user apparatus is provided that is capable of being controlled by a user. The user apparatus could take many forms which allow a user to access the apparatus. (For instance, the user apparatus could take the form of a kiosk apparatus 100, for gathering and transmitting data to a remote location. The data could consist of any type of information such as digital data or signals, non-digital data or signals, digital image data, digital video data, compressed data, encrypted data, or the like. The remote location could be any position. Preferably, the remote location is spaced from the user apparatus. For instance, the location could be a storage medium such as a floppy disk or other storage medium, another computer, a computer server, a network, a television, another user apparatus, an e-mail in box, or the like.

As shown in FIG. 1, the kiosk apparatus 100 may include a stand 102 for anchoring to a support surface 104. In one embodiment, the stand 102 can be permanently mounted to a support surface 104. For example, a cement and pole assembly can be provided to permanently anchor the stand 102 to the support surface 104. The stand 102 can also comprise four rod posts 105 (i.e., two rear rods located behind the two front rods shown in FIG. 1) that are anchored to the support surface 104 by securing a plate 101 to the surface 104 with bolts 103.

In one embodiment, the rod posts 105 may comprise a first set of rods 117 telescopically received in a second set of rods 119, thereby providing a stand having a vertically adjustable height to accommodate various users of the apparatus. In another embodiment, a base 115 is provided that is mounted to the rod posts 105 and the plate



101. A conduit 107 may also be provided to enclose any electrical wiring extending along the stand 102. The conduit 107 and electrical wiring may take the form of an armored cable.

As shown in FIG. 1, the base could be formed as a raised step for the user. The base 115 can also include an interior cavity having an access door 109 for storing electrical components of the apparatus. Alternatively, the base can be countersunk into the ground with the access door 109 located at a top portion of the base, as shown in FIG. 3.

Computer programs to run the kiosk could be loaded on the system on-site. Alternatively, software could be loaded off site by establishing a remote link with another system. For instance, updated kiosk apparatus software could be pushed to all existing kiosks from a single remote location without having to physically visit each kiosk apparatus. Similarly, if the kiosk is used as a game center, software games could be uploaded to the kiosk apparatus from the remote location.

As shown in FIG. 2, another kiosk apparatus 200 is similar to kiosk apparatus 100 except, the apparatus 200 includes a transport device 202 with wheels 204, such as heavy duty rubber wheels, providing mobility. The transport device 202 also includes a protective wheel guard 206 incorporating a wheel lock (not shown). The wheel guard 206 helps prevent contact between the wheels and objects adjacent the apparatus 200. Moreover, the wheel lock immobilizes the apparatus 200 once the apparatus has been wheeled in place. A grounding strap (not shown) may also be provided to electronically ground the mobile kiosk.

The kiosk apparatus includes an image device for obtaining data. The image

device collects digital or non-digital data. For instance, the image device could take the form of a digital image device or a non-digital image device. In one embodiment, the image device is in the form of an input port. In one particular embodiment, the input port could take the form of a digital input port that may comprise a digital media reader 120  
5 for gathering data from a compact storage unit of a portable electronic device (not shown), such as a digital camera, MP3 audio player/recorder, or a PALM PILOT organizer used as a hand held information storage device. The digital media reader 120 may be connected to a central processing unit ("CPU") 122 by an electrical connection such as a universal serial bus ("USB") cable. It is understood that the input port can be  
10 designed to interface with many types of devices that upload digital information. For instance, the input device can be designed to upload information from a floppy disk, PCMCIA card, an infrared transmitter, a parallel cable, a SCSI cable, serial cable, a universal serial bus "USB" cable, or the like.

As shown in FIGS. 4 and 5, the digital image device may take the form of a rear  
15 image capture device 111 for capturing images directed towards the user of the apparatus. The kiosk apparatus may include a timer for allowing the user to enter the scene before the image device captures the photo. For instance, the timer could comprise flashing red light or a beeping auditory signal that increases in frequency until the photo is taken. As shown in FIGS. 3-5, the digital image device may also take the form of a front image  
20 capture device 110 directed to capture image data of the user of the apparatus. A combination of capture devices 110, 111 can be provided to allow a user to take a picture of the scenery as well as a group or self-portrait. The combination of capture devices 110, 111 may allow simultaneous split screen images to be displayed in a dual camera mode. Each of the split screens would include image/video obtained from a corresponding one

of the capture devices 110, 111. Audio data may be obtained from a microphone 134 and/or from the capture devices 110, 111. The image capture devices 110, 111 can store the visual data for later retrieval. Alternatively the image capture devices 110, 111 can immediately transmit the information for real time data transfer, in a process known as  
5 streaming. The kiosk apparatus could also be designed to transform the captured data before downloading or to allow the user to transform the data before downloading. For instance, the user could modify the captured data with an editing program, thereby enhancing or significantly modifying the data to achieve a desired appearance or effect.

10 As shown in FIGS. 3-6, interface modules or circuitry can be provided for electrically connecting the capture device 110, 111 to the CPU 122. For instance, a video card may be used for encoding of digital video, video replay and compression and decompression. Alternatively, or in addition, a IEEE1394 FIREWIRE card or card of like capacity may be used for capturing digital video streams from the digital capture devices  
15 110, 111. The devices 110, 111 can take many forms such as a digital camera, a digital video camcorder, an analog camcorder with a digital converter, a high definition television recording device, a 3-D video recording device, or a digital video component for capturing data in the form of a digital photo, sequence, or scene. The digital capture devices 110, 111 may further include a lighting device (not shown) for illumination and/or  
20 lens filters to control illumination or otherwise modify the captured data.

~~Payment for the services of an apparatus may be provided in a variety of ways, such as debit/credit cards, debit/credit accounts, currency, check, pre-paid cards or the like.~~ For instance, if an attendant is operating the kiosk apparatus for the user, the

attendant may simply accept payment in the form of currency, check, token, or other form of payment. The apparatus can also be designed to directly charge the user's cellular phone account or a registered account previously set up by the user. In addition, the apparatus preferably includes a vending apparatus such as a currency validator 118 for  
5 accepting currency as payment and/or a card reader 116 for accepting payment account information from a debit/credit card. As illustrated in FIGS. 3-6, the credit card reader 116 and currency validator 118 may be connected to the CPU 122 by internal circuitry such as a serial or phone line. The currency validator 118, for instance, may be similar to the AMAZING 125 UNV without LRC validator which is available from Happ Controls.  
10 For example, the card reader may be a Port Powered RS 232 insert card reader manufactured by Magtek.

The kiosk apparatus could also include an accounting device (not shown) that monitors the usage of the kiosk apparatus. Updated account information will allow a comparison between the payments received and the usage of the device.

15 The CPU 122 may be provided for controlling components of the kiosk apparatus and processing information obtained with the digital media reader 120 and/or the digital capture devices 110, 111. The CPU 122 may comprise one or more processors, controllers, logic circuits, and/or programmable circuits. The CPU is preferably weather proof and shock proof such as the DURAPAC processor manufactured by Dolch  
20 Computer, Inc. The CPU 122 may output data to a printer 152 and/or a communication device 132. The printer 152 can be a color printer for printing out color photos obtained from the kiosk apparatus. The CPU 122 may also output the data to other output devices such as a digital photographic printer, a sticker printer, a T-shirt printer, a floppy disk, a

compact disk, a post card printer, a video cassette recorder or a variety of other devices. The communication device 132 can transmit the data to a remote location such as a data server, a computer, a television, a monitor, or another kiosk apparatus. For instance, the data can be transmitted through communication line 128 via a variety of communication devices for eventual reception by a web site, mailbox or other destination. The communication line 128 is capable of connecting via wireless, radio, cable, DSL, landline, T1 line, or the like. The mobile kiosk apparatus 200 may also be provided with similar communication device(s) including a communication line 228 which may be connected via a CANNON plug connector.

As shown in FIGS. 5 and 6, the communication device 132 is connected with internal circuitry to the CPU 122. The communication device 132 can be comprised of any suitable circuitry or components for transmitting data, such as a wireless modem, a wired modem, a DSL modem, a wireless cellular dish, a transmitter, a radio transmitter, an Ethernet card, a telephone transmitting device, a fiber optic device, a fiber optic cable, or the like. For example, the communication device 132 can comprise a wireless modem for connection to the Internet when the kiosk apparatus is isolated from a telephone outlet. Other devices can be used for wireless transfer. For instance, the CPU 122 could be connected to an antenna 136 for wireless communication. A variety of antennas could be used such as parabolic, HF, VHF, SHF, or the like. Alternatively, the CPU may be connected to a Cellular Digital Packet Data Modem ("CDPD"), a router such as a CISCO uBR7246 universal broad band router, local area network, wide area network, Ethernet connection and/or a cellular phone communication jack, or the like. A local area network comprises a network of devices in communication with one another that spans a relatively small area when compared to a wide area network. A wide area network, such as the

Internet, comprises a network of devices in communication with one another that spans a relatively large geographical area when compared to a local area network. A wide area network may consist of two or more local area networks.

The mobile kiosk apparatus 200 can also be transported to the remote location for downloading and/or could include a memory drive (not shown) for transferring information. For instance, an attendant operating the mobile kiosk apparatus 200 can collect the data with the memory drive and upload the information to the remote location periodically or on demand. The memory drive can also be provided for loading software on the system for execution by the CPU 122. The memory drive can take many forms such as a CD drive, a floppy drive, a ZIP drive, a JAZZ drive, or the like, for data transfer.

The apparatus may include a visual display 112 for presenting visual information and speakers 150 for providing audio information, each being located on one side 138 of the apparatus. Preferably, the display 112 can be rotated 360° and tilted up and down, thereby allowing the digital capture devices 110, 111 to capture the final product as a digital photo or video. For example, the display may be oriented manually by a user or with a motor. By orienting the display 112, a user may point the digital capture device 110, 111 while simultaneously viewing the captured data with the viewing portion 113 of the display 112. The display 112 may be connected to the CPU 122 by an appropriate monitor connector, such as a VGA or HD15 cable. A traditional or touch screen display may be used that is hardened and weatherproof, such as the DIABLO display manufactured by Dolch Computer Inc. The kiosk apparatus may also include a cover (not shown) to protect the display. For example, the cover may comprise a transparent plexiglass shield. A full hood (not shown) may also be provided for protecting the kiosk

when the kiosk apparatus is not in use.

The adjustable display 112 also allows for modifying and enhancing the data before transmitting the data to the remote location. For instance, messages, audio or images can be added, and the image and/or audio data can be enhanced or manipulated. In one  
5 embodiment, the housing 114 of the display 112 is hardened and weatherproof and at least partially encloses the digital capture devices 110, 111, the CPU 122, and the display 112. The CPU 122 may either be positioned inside the housing 114, inside the stand 102, or outside the stand in another suitable location.

Other input devices may be provided for interacting with the kiosk apparatus  
10 and/or for adding additional information to the digital data. For instance, textual or audio information can be added by input devices such as a keyboard 106, a pointing device 108, a microphone 134, or an electronic writing pad 121. As shown in FIGS. 3-6, the input devices are electrically connected to the CPU 122 for example by a serial cable or USB cable. Alternatively, the input devices could link to the CPU with an infrared or a wireless  
15 communication device. The keyboard 106 may or may not rotate with the display 112 and can have an ergonomic location below the display 112. The microphone 134 can be used to add audio information to the digital data and/or can be used in combination with voice recognition software to allow keyless entry of textual information. The optional electronic writing pad 121 converts handwriting into bitmap or other format which can be attached  
20 or integrated with the digital data. The electronic writing pad 121 may include a stylus 123 for entry of written information. Furthermore, the pad 121 may also be used in combination with text recognition software to allow keyless entry of textual information. The keyboard 106 is preferably weatherproof such as the STORM (Model No. 11000203)

manufactured by MGR Industries. The pointing device 108 is preferably a hardened, weatherproof design. For instance, the pointing device 108 can be a mouse/joystick type device, such as, an IM2-P joystick made by MGR Industries.

The components of the apparatus may be connected to a power strip 146 including  
5 a surge protector to protect the electrical components from power surge damage. For instance, the power strip may be connected to a power source by wiring 124 directly to an external power supply or by plugging into a power outlet. The power strip 146 can also be connected to a self-contained power supply 130, such as a rechargeable battery, for convenience and situations where the apparatus is installed away from a power source.  
10 For instance, the external power supply can comprise a battery 130, such as a battery rechargeable by power received from the wiring 124. Solar energy can also be used to power the apparatus or to recharge a battery of the apparatus. For instance, a solar panel 126 can be electrically connected to a battery 130, thereby allowing the battery to be recharged. The solar panel 126 can also be directly connected to the power strip 146 to  
15 at least partially power the kiosk. Protective shielding (not shown) can also be included to isolate the battery from adjacent components. The mobile kiosk apparatus 200 can also have a power source identical to the power source of the apparatus 100 including a battery 230 with wiring 224.

The kiosk or input kiosk may include a sensor, for instance, an infrared or motion  
20 sensor 142 in the housing to allow the input devices to capture information after the occurrence of a particular event. If the sensor 142 detects a particular event, such as motion, the sensor 142 activates a sensor motor 144 which causes the kiosk apparatus to collect visual and/or audio information and/or to power up the kiosk for operation.



The kiosk apparatus may further include a tracking device (not shown) to deter theft. For instance, a LOJACK tracking device can be installed to assist in locating a kiosk apparatus that is stolen. The kiosk apparatus can also include a global positioning system 148 to determine the location of a kiosk apparatus and to display or transmit the location of the kiosk apparatus to another location. This system may be useful where the location of the kiosk apparatus changes, for example, an apparatus installed on a cruise ship.

It will be appreciated that the kiosk apparatus of this invention has a wide variety of applications. As mentioned above, the kiosk apparatus 200 of FIG. 2 can include a cart for mobility. The mobile kiosk apparatus 200 includes many of the features of the apparatus 100 of FIG. 1 and FIGS. 3-5 including a self-contained power supply 230, such as a battery as discussed above. An attendant can operate the apparatus, monitor a user, and/or accept payment from a user.

Alternatively, as shown in FIG. 1, the kiosk apparatus 100 can be anchored to a support surface and operated entirely by a user. Such a kiosk apparatus 100 would be secured to a particular location without the need for an attendant to assist the user.

In another embodiment, a kiosk as described above could be used as a master kiosk to control and obtain data from a slave kiosk. The slave kiosk can be located at a distant observation point for obtaining and transmitting input data to the master kiosk. The slave kiosk, in this case, may not necessitate the need of a display, card reader or currency validator. In operation, a user would approach the master kiosk and link to the slave kiosk. Once linked, the user can control the slave kiosk by entering in commands with the master kiosk. For instance, the user can input a command that would direct the

slave kiosk to collect data by activating an image capture device having a motor, and/or various other devices of the slave kiosk. The data can then be transmitted by the slave kiosk to the master kiosk for access by the user. While accessing the data, the slave kiosk may appear transparent to the user, thereby making it appear that the user is actually  
5 viewing information from the distant observation point.

It will also be appreciated that the master kiosk may be linked with another master kiosk in order to video conference wherein visual and/or audio information are transmitted in real time between the master kiosks. A plurality of master kiosks or other video conference devices may also be linked together to allow a group video conference.

10 As best shown in FIGS. 1-4, the kiosk apparatus 100, 200 may have components such as the housing 114 formed in the shape of an eye with the display 112 representing the pupil of the eye. The solar panel 126 may be formed in the shape of an eyebrow to compliment the shape of the housing 114. Moreover, the components of the kiosk apparatus may be housed in a hardened case to protect the kiosk apparatus from weather  
15 and vandalism. The hardened case is useful where the kiosk apparatus is used outside or in unguarded tourist locations, vacation spots, and other public places.

The kiosk apparatus could also include a heating, ventilation, air conditioning ("HVAC") device for preventing the components of the apparatus from overheating. For instance, ventilation slots could be provided in the kiosk apparatus or the apparatus could  
20 include a fan or an air conditioning unit such as a heat pump.

~~FIG. 7 illustrates a flow diagram 400 demonstrating a step-through menu that allows the user to select one or more of the various alternative applications for the kiosk apparatus. In this embodiment, a user is initially greeted with a start screen, as indicated~~

by block 402. The start screen provides the user with general information regarding the various services offered by the kiosk apparatus. The user may select from the following services: a digital telescope, indicated by block 404; a digital video, indicated by block 410; a digital photo/e-mail, indicated by block 428; digital photo or file upload, indicated  
5 by block 450; video conference, indicated by block 468; data retrieval, indicated by block 482; or e-mail with stock card or stock video, indicated by block 490. A stock card or stock video, referred to throughout this application, refers generally to any form of media, multimedia, or the like. There may be one or more stock cards/videos available on the system for selection by various users of the kiosk.

10 The user may select the digital telescope option, indicated by block 404, if the user desires to obtain a digital view of a surrounding scene. If the telescope option 404 is selected, a payment screen 502 appears. The user provides payment corresponding to the time interval of use as described in more detail below. A digital telescope screen, indicated by block 406, then appears and a timer starts to count down the time interval as  
15 shown in FIG. 8. A large portion of the viewing portion 113 displays the images gathered by the digital capture device 111 of the kiosk apparatus. The user may adjust the display 112 in order to change the viewing direction and may also focus, zoom in, and zoom out to observe the surrounding scene, as indicated by block 408. The digital capture device 111 may also be provided with various filters for modifying the image data obtained from  
20 the kiosk apparatus. Once the time has elapsed, the start screen reappears, indicated by block 402 as shown in FIG. 8.

The user may also select digital video option, indicated by block 410, if the user is interested in capturing a digital video and sending the video to another location. The

digital video could be provided alone or in combination with audio information as well.

If the digital video option is selected, the payment screen appears, indicated by block 502.

After payment, the digital video screen appears as shown by block 412 in FIGS. 7 and 9.

The user has a limited time period to record a video, indicated by block 414, with the

5 digital capture devices 110, 111. During that time, the user may focus, zoom in and zoom

out, as indicated by block 416, with the capture devices 110, 111 as desired. After the

predetermined time interval has elapsed, the user may review the recorded video to

determine whether the video is satisfactory, indicated by block 418. If the user is not

satisfied, the digital video may be retaken a limited number of times.

10 If satisfied, the user adds an address and message as indicated by block 420. For

instance, the user can look up e-mail addresses, indicated by block 422, from the kiosk

system, an informational web site, or another location. As shown by block 424, a stock

message can also be added before sending the video. The message can be typewritten, or

include a stock photo or video previously stored on the kiosk apparatus. For instance, a

15 professional video clip or a map of the surrounding area can be stored for use as a stock

video or photo by various users.

Before or after sending, the user is also prompted whether the same video should

be sent to another person, as indicated by block 426. If the video is to be sent to another

person, the user is looped through the payment screen, as indicated by block 502 in FIG.

20 9, and back to the address and add message screen, indicated by block 420. Otherwise,

the user is routed back to the start screen as shown by block 402 in FIG. 9.

The user may select the digital photo/e-mail option, indicated by block 428, if the

user wants to capture a digital photo and then send the photo to another location. If the

digital photo/e-mail option is selected, the payment screen appears as indicated by block 502. After payment, the digital photo/e-mail screen appears as shown by block 430 in FIGS. 7 and 10. The user can rotate the capture device, zoom in, zoom out and focus with the digital capture device before capturing the photo as shown by block 432 in FIG.

5 10. Once the viewed scene is satisfactory, the user may either manually snap the photo, indicated by block 434, or automatically take the photo with a timer as indicated by block 436. Capturing the photo with a timer allows the user enter the scene before the digital photo is taken. Once the photo is captured, the user views the photo and determines whether the image is satisfactory as indicated by block 438. In the dual camera mode, a  
10 split screen image/video may be captured. If the user is not satisfied, the photo may be retaken a limited number of times.

When the user obtains a satisfactory photo, an optional frame may be added to the card, as indicated by block 440. For instance, the photo can have a seasonal frame 158 including linked candy canes with a seasonal message incorporated therein. Alternatively,  
15 the photo could be embedded or attached to a stock card or stock video such as a stock card or video with a seasonal theme. Other types of frames, cards and/or videos can also be provided as options to enhance the appearance of the photo. Once the user has chosen whether to add a frame, stock card or stock video, an address and add message screen appears as shown by block 442. The user can look up e-mail addresses, indicated  
20 by block 444, in a similar manner as the user can look up addresses with the digital video option. A stock message, indicated by block 446, can also be added in a similar manner as adding a stock message with the digital video option.

Prior to, or after sending, the user is also prompted whether the same photo should

be sent to another person as indicated by block 448. If the photo is to be sent to another person, the user is looped through the payment screen, as indicated by block 502 in FIG. 10, and back to the address and add message screen, indicated by block 442. Otherwise, the user is forwarded to the start screen as indicated by block 402 in FIG 10.

5       The user may select the digital photo or file upload option, indicated by block 450, if the user has a medium containing information to upload to another location. For instance, a removable memory unit containing digital photos can be removed from a digital camera and the data therein uploaded to the kiosk apparatus. If the digital photo or file upload option is selected, the payment screen appears as shown by block 502.  
10       After payment, the digital photo or file upload screen appears as shown by block 452 in FIGS. 7 and 11. The medium may then be inserted into the kiosk, indicated by block 454, for uploading data from the medium to the kiosk.

      Once the files are read, an address and add message screen appears, indicated by block 456, and the user selects the data to be uploaded as indicated by block 458. The  
15       user can look up e-mail addresses, indicated by block 460, in a similar manner as the addresses are found with the digital video option. If the user is sending the information by e-mail, a frame, stock card or stock video may be provided, as indicated by block 462, for the corresponding data in a manner similar to the adding a frame, stock card, or stock video option of the digital photo/e-mail option. Alternatively, if the data is being uploaded  
20       to a web site, an electronic folder can be created on the site. The folder would organize the electronic files and ease location of the files at a later time. Once the transfer selection is complete, the information is either sent to the web site for storage or e-mailed to another user for download as indicated by block 464.

Prior to, or after sending, the user is also prompted whether the same data should be sent to another person as indicated by block 466. If the data is to be sent to another person, the user is looped through the payment screen, indicated by block 502 in FIG. 11, and back to the address and add message screen as indicated by block 456. Otherwise,  
5 the user is routed back to the start screen as indicated by block 402 in FIG. 11.

As another example, if the user wants to video conference with another person in real time, the user may select the video conference option as indicated by block 468. If the video conference option is selected, the payment screen appears as indicated by block 502. After payment, the video conference screen appears as indicated by block 470 in  
10 FIGS. 7 and 12. A digital capture device 110 is directed towards the user for conferencing. The user may then zoom in and zoom out and focus the capture device 110 as shown by block 472. Once the conference view has been set up, the user selects the address(es) for the other conference member(s), indicated by block 474, for conferencing with one or more other conference members. After selection of the address(es),  
15 a connection between the conference member(s) is established, indicated by block 476, and a conference timer begins counting down a preselected time interval as indicated by block 478. After the time interval has elapsed, the user may extend the time as indicated by block 480. If the user decides to extend the time, the user is looped to through the payment screen, as indicated by block 502 in FIG. 12, and then the conference timer  
20 begins counting down the new preselected time interval indicated by block 478. If the user does not pay to extend the time, the conference call ends and the start screen is displayed as indicated by block 402 in FIG. 12.

The user may also be interested in obtaining information with the kiosk. The

information can be stored on the kiosk or can be contained in other computers linked to the kiosk by the Internet or otherwise. For instance, local area information (e.g., maps) can be stored directly on the kiosk for viewing. Alternatively, the user can browse the web for additional information. The user may select the data retrieval option, indicated  
5 by block 482, in order to search for information. If the data retrieval option is selected, the payment screen appears as indicated by block 502. After payment, the data retrieval screen appears, as indicated by block 484, and a timer starts counting down a preselected time interval as illustrated in FIG. 13. The user may then search for the desired information, indicated by block 486, until the time interval expires. Once the time interval  
10 elapses, the user is given the option to extend the time as indicated by block 488. If the user decides to extend the time, the user is sent through the payment screen, indicated by block 502 in FIG. 13, and then the timer begins to count down the new preselected time interval. If the user decides to end the data retrieval search, the start screen is displayed as indicated by block 402 in FIG. 13.

15 The user may also be interested in e-mailing someone an electronic card with a message attached to the card. For instance, a user may select a seasonal card from a set of stock cards and add a seasons greeting to the card. If the user is interested in e-mailing a stock card, the user may select the e-mail with stock card option as indicated by block 490. If the user selects the e-mail with stock card option, the payment screen appears as  
20 indicated by block 502. After payment, the e-mail with stock card screen appears as indicated by block 492 in FIGS. 7 and 14. The user may decide to select a stock card or stock video to e-mail as indicated by block 494. Otherwise, the user can simply e-mail a message without the card. An address and add message screen then appears as indicated by block 496. As with many of the options above, the user can select and look up e-mail



addresses, indicated by block 498, from the internal memory of the kiosk apparatus or an informational web site. A stock message can also be added, as indicated by block 497, in a similar manner as the user could add a stock message with the digital video option. Prior to, or after sending, the user is also prompted whether the same video should be sent  
5 to another person as indicated by block 499. If the video is to be sent to another person, the user is looped through the payment screen, as indicated by block 502 in FIG. 14, and back to the address and add message screen indicated by block 496. Otherwise, the user is looped back to the start screen as indicated by block 402 of FIG. 14.

FIG. 15 illustrates of a flow diagram illustrating the method of providing the kiosk  
10 apparatus with payment. All of the options route the user through the payment screen, indicated by block 502, before the services are rendered. From the previous selection, indicated by block 504, the user enters the payment screen wherein the user has a number of alternatives in which to provide payment. For instance, the user may insert a credit or debit card, indicated by block 506, into the card reader 116 of the kiosk apparatus,  
15 thereby providing the kiosk apparatus with payment account information.

Alternatively, the user may provide currency as payment, indicated by block 508, by inserting the currency into a currency validator 118. The user can also provide payment by charging the fees to a pre-paid user account or to a credit account as a registered user of the kiosk apparatus as indicated by block 510.

20 The user can also provide payment by charging the fee to the user's cellular telephone as indicated by block 512. If an attendant is present, the user can provide payment by simply paying the attendant as indicated by block 514. If the user fails to provide payment to the attendant, the user is not permitted to continue using the kiosk and

the attendant resets the kiosk apparatus to the start screen as indicated by block 402 of FIG. 15. Similarly, if an invalid payment is received with one of the other payment methods, the kiosk apparatus then displays the start screen as also indicated by block 402 of FIG. 15.

5 In another embodiment, an invalid payment or no payment can loop the user back through the payment screen again to make a further attempt at providing a valid payment. If a valid payment is received, the apparatus displays the screen, indicated by block 516, associated with the selected option.

FIG. 16 illustrates a flow diagram of a method 300 of using a kiosk apparatus 100, 10 200 such as the kiosk apparatus 100, 200 shown in FIGS. 1-6 corresponding to the digital photo or file upload option indicated by block 450. The method includes obtaining data from a conventional portable electronic device as shown by block 302. For instance, a digital photo can be taken with a digital camera or a digital video can be recorded with a digital video camcorder. Alternatively, data may be obtained with other devices such as 15 an electronic organizer such as a PALM PILOT organizer, cellular phone, personal computer, or the like. The data could include all types of data including digital data, non-digital data, digital image data, digital video data, programs, compressed data, encrypted data, or the like.

After the data has been obtained, the user approaches the kiosk apparatus, as 20 indicated by block 304, and pays the fee associated with the service to be rendered, as indicated by block 306. Once the kiosk apparatus approves payment, the data may be directly transferred from the portable electronic device to the kiosk apparatus as indicated by the arrow leading from block 306 to block 312.

Alternatively, the method may include the additional step of removing a conventional compact storage unit containing the data from the electronic device as indicated by block 308 and then inserting the storage unit into the digital media reader 120 as indicated by block 310. Once inserted, the digital media reader 120 reads the data from the storage unit and uploads the data from the storage unit to the kiosk apparatus as indicated by block 312. This may occur automatically upon loading the storage unit, or manually upon input by the user. The data read may be entered into memory, such as RAM, hard disk, floppy disk, or other storage medium which can be accessed by the CPU. In addition, other examples for transferring the data from the electronic device include: floppy disk, PCMCIA card, Infrared, parallel cable, SCSI cable, serial cable, or USB cable.

Once the data is transferred from the compact storage unit to the kiosk apparatus, the data may be transmitted to the remote location, as indicated by block 316. The data may be transmitted using a communication device that provides a wireless, radio, telephone, wired, or Ethernet connection to the Internet. The data may be transmitted by a direct communication route between the kiosk apparatus and the remote location or via indirect routes, such as the Internet or the World Wide Web. In addition, the kiosk apparatus can also include a device (not shown) adapted to encrypt the data or otherwise secured the data to prevent unauthorized viewing of information. Moreover, a camcorder, or other portable electronic device could be linked to the kiosk apparatus for downloading during or shortly after capturing the data with the portable electronic device.

As shown in FIG. 16 the flow diagram may include the additional step 314 of selecting and entering stock data to the data uploaded from the compact storage unit. For

instance, the user can select a stock electronic greeting card or video clip to add to the data uploaded from the compact storage unit. For instance the electronic greeting card can be sent as an attachment with the uploaded data or sent embedded with the uploaded data. The additional step 314 may also use other input devices such as a touch screen display, a keyboard, a pointing device, and/or a microphone to add a textual or audio message to the data or to the data and the electronic greeting card. Moreover, the card and/or data may be otherwise edited, manipulated, enhanced and/or customized during step 314. The step of transmitting would further include transmitting the uploaded data with the newly added data.

Turning to FIG. 3, the kiosk apparatus may be used to digitally record and send digital image post cards or photos from tourist locations without the need for a camera. As discussed in detail above, in one application, the user may orient the display 112 to direct the rear digital capture device 111 towards a scene 154. The scene could comprise of a view of a person, place, and/or object, or the like. After paying a fee, the user can focus, zoom in and/or zoom out to view a portion 156 of the scene to be captured.

An image is then captured as a digital photo 157. The user may then enhance, manipulate, or otherwise alter the photo using editing software on the kiosk apparatus. For instance, the user could change the color, crop the photo, change the brightness, or edit the photo in another manner with photo editing software.

The user could also create a digital post card by adding a frame, stock card or stock video. For instance, a seasonal frame 158 may be selected to frame the photo. A message could also be added to the photo and/or incorporated with the frame, stock card or stock video. For instance, a seasonal message 160 could be incorporated as part of the

seasonal frame 158.

Once the user is satisfied, the address of the remote location is entered or looked up and then entered into the kiosk apparatus. For instance, after entering in an e-mail address of another user, the digital post card is then e-mailed through a communication  
5 line 128. Eventually, a remote location, such as a remote computer 162 receives the photo/post card as a digital e-mail message.

In general, at least one embodiment of the invention allows for the public to digitally record and send digital image post cards from tourist locations without the need for a camera, stamps, film, or film development, and without the delay in developing and  
10 sending traditional photographs. Moreover, at least one embodiment of the invention allows the public to free the memory of a portable electronic device, such as a digital camera for example, without losing the data stored therein, and without requiring additional memory units to be available.

The foregoing description of the various embodiments of the invention has been  
15 presented for the purposes of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise form disclosed. For instance, the instant invention could take any form that would provide convenient access to a user. As discussed above, one such embodiment could take the form of a kiosk. Many alternatives, modifications and variations will be apparent to those skilled in the art of the above  
20 teaching. Accordingly, this invention is intended to embrace all alternatives, modifications and variations that have been discussed herein, and others that fall within the spirit and broad scope of the claims.

## WHAT IS CLAIMED IS:

1. A user apparatus for gathering and transmitting data to a remote location comprising:

a) an image device adapted to gather image data from a scene outside the user apparatus;

5 b) a vending apparatus adapted to accept payment;

c) a processing unit in communication with the vending apparatus and the image device and configured to receive the image data and detect the payment; and

d) a communication device in communication with the processing unit and configured to transmit the image data to a remote location.

2. The user apparatus of claim 1, wherein the user apparatus comprises a kiosk apparatus.

3. The user apparatus of claim 1, wherein the image device comprises an input port adapted to obtain the image data from another device.

4. The user apparatus of claim 3, wherein the input port comprises a digital media reader adapted to read data recorded on a portable memory unit by a portable electronic device.

5. The user apparatus of claim 1, wherein the image device comprises a digital image capture device.
6. The user apparatus of claim 5, wherein the digital image capture device comprises a video camcorder.
7. The user apparatus of claim 5, wherein the digital image capture device comprises a digital camera.
8. The user apparatus of claim 1, wherein the vending apparatus comprises a currency validator adapted to accept currency as payment.
9. The user apparatus of claim 1, wherein the vending apparatus comprises a card reader adapted to read payment account information from a card.
10. The user apparatus of claim 1, further comprising a display adapted to display information.
11. The user apparatus of claim 10, wherein the display comprises a touch screen display adapted to display and enter information.

12. The user apparatus of claim 10, further comprising an input device adapted to enter information.
13. The user apparatus of claim 12, wherein the input device comprises a keyboard.
14. The user apparatus of claim 12, wherein the input device comprises a pointing device.
15. The user apparatus of claim 12, wherein the input device comprises an electronic writing pad.
16. The user apparatus of claim 1, further comprising an audio capture device adapted to capture audio data.
17. The user apparatus of claim 16, further comprising voice recognition software adapted receive the audio data as input to allow keyless entry of textual information.
18. The user apparatus of claim 1, further comprising a weatherproof and hardened case.



19. The user apparatus of claim 18, wherein the case at least partially encloses at least one of the image device, vending apparatus, processing unit, and communication device.
20. The user apparatus of claim 1, further comprising a stand adapted to secure the user apparatus relative to a support surface.
21. The user apparatus of claim 20, wherein the stand provides the user apparatus with vertical adjustability.
22. The user apparatus of claim 21, wherein the stand comprises telescoping members adapted to provide the user apparatus with the vertical adjustability.
23. The user apparatus of claim 1, further comprising a transport mechanism adapted to transport the user apparatus from one location to another.
24. The user apparatus of claim 1, further comprising a self-contained power supply.
25. The user apparatus of claim 1, further comprising a rechargeable battery.

26. The user apparatus of claim 1, wherein the communication device comprises a transmitter adapted to provide wireless transmission to a remote location.

27. The user apparatus of claim 1, wherein the communication device is adapted to connect to the Internet.

28. The user apparatus of claim 1, wherein the communication device is adapted to connect to a local area network.

29. The user apparatus of claim 1, wherein the communication device is adapted to connect to a wide area network.

30. The user apparatus of claim 1, wherein the communication device is adapted to connect to another user apparatus.

31. The user apparatus of claim 1, wherein the communication device is adapted to connect to a video conferencing device.

32. The user apparatus of claim 1, further comprising a solar device adapted to convert solar energy into electrical energy to power the user apparatus.

33. The user apparatus of claim 1, wherein the user apparatus is adapted to encrypt the image data.

34. A user apparatus for gathering and transmitting data to a remote location comprising:

a) a gathering device adapted to gather signals originating outside the user apparatus;

5 b) a vending apparatus adapted to accept payment;

c) a processing unit in communication with the vending apparatus and the device and configured to receive data and detect the payment; and

d) a communication device in communication with the processing unit and configured to transmit the data to a remote location.

35. The user apparatus of claim 34, wherein the user apparatus is adapted to encrypt the signals.

36. The user apparatus of claim 34, wherein the signals are audio signals and wherein the gathering device comprises an audio device for gathering the audio signals.

37. The user apparatus of claim 34, wherein the signals are video signals and wherein the gathering device comprises a video device for gathering the video signals.

38. The user apparatus of claim 34, wherein the signals are digital signals and wherein the gathering device comprises an information device for gathering the digital signals.

39. A method of gathering data with a portable electronic device and transmitting the data to a remote location comprising the steps of:

- a) obtaining data with a portable electronic device;
- b) transporting the data to a user apparatus including a vending apparatus for accepting payment and a communication device for transmitting data:
- c) providing the vending apparatus with payment;
- d) transferring the data to the user apparatus; and
- e) transmitting the data from the user apparatus to the remote location using the communication device.

40. The method of claim 39, wherein the transferring step comprises:

- a) removing a portable storage unit including the data from the portable electronic device;
- b) inserting the portable storage unit into a digital media reader provided on the

user apparatus; and

c) transferring the data from the portable storage unit to the user apparatus.

41. The method of claim 39, wherein the step of providing payment comprises inserting currency into the vending apparatus.

42. The method of claim 39, wherein the step of providing payment comprises engaging a card with the vending apparatus and transferring payment account information from the card to the user apparatus.

43. The method of claim 39, wherein the step of providing payment comprises charging a fee to a cellular phone account.

44. The method of claim 39, wherein the user apparatus further includes an input device, and further including the steps of:

a) adding a textual or audio message to the data using the input device; and

b) wherein the step of transmitting includes transmitting the textual or audio message with the data.

45. The method of claim 39, further comprising the steps of:

- a) selecting an electronic greeting card; and
- b) adding the data to the electronic greeting card; and
- c) wherein the step of transmitting includes transmitting the electronic greeting card with the data.

5

46. The method of claim 45, wherein the user apparatus further includes an input device, and wherein the method further comprises the steps of:

- a) adding a textual or audio message to the electronic greeting card using the input device; and
- b) wherein the step of transmitting includes transmitting the textual or audio message with the data and the electronic greeting card.

5

47. A method of gathering and transmitting data to a remote location comprising the steps of:

- a) providing a user apparatus with payment;
- b) capturing image data using a digital capture device provided on the user apparatus;
- c) transmitting the image data to a remote location using a communication device in communication with the user apparatus.

5

48. The method of claim 47, further comprising the step of encrypting the image data before transmitting the image data to the remote location.

49. The method of claim 47, wherein the step of providing payment comprises inserting currency into a vending apparatus.

50. The method of claim 47, wherein the step of providing payment comprises engaging a card with a vending apparatus and transferring payment account information from the card to the user apparatus.

51. The method of claim 47, further including the steps of:

a) adding a textual or audio message to the data with an input device on the user apparatus; and

b) wherein the step of transmitting includes transmitting the textual or audio message with the data.

5

52. The method of claim 47, further including the steps of:

a) selecting a message using an input device on the user apparatus; and

b) adding the message to the data; and

c) wherein the step of transmitting includes transmitting the message with the data.

53. The method of claim 47, further comprising, saving the data prior to the transmitting step.
54. The method of claim 47, wherein the step of transmitting the image data comprises transmitting the data in real time.
55. The method of claim 47, wherein the data is transmitted in real time during a video conference between a user of the user apparatus and a user of a device.
56. The method of claim 47, wherein the step of transmitting the image data comprises transmitting the data through the Internet.
57. The method of claim 47, wherein the remote location comprises another user apparatus.
58. The method of claim 47, comprising the further step of capturing audio data with an audio capture device.



1 / 13

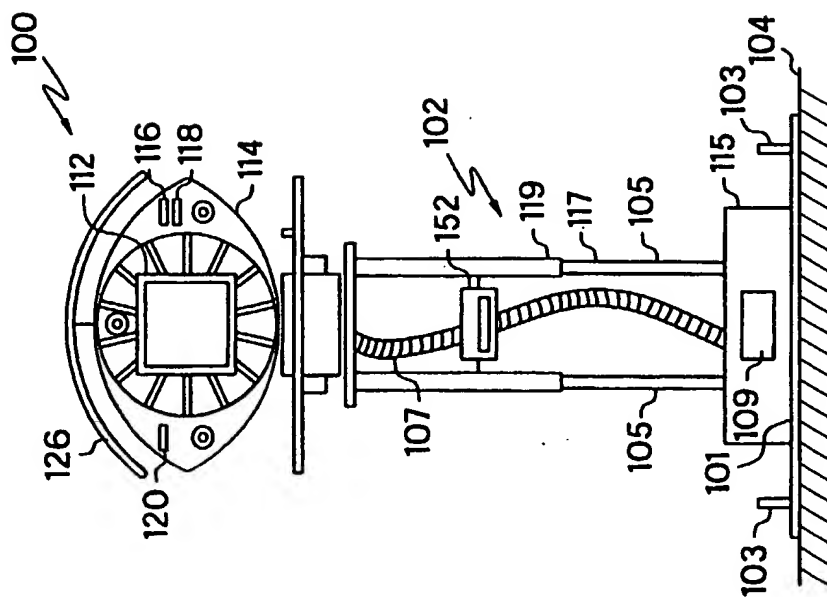


FIG. 1

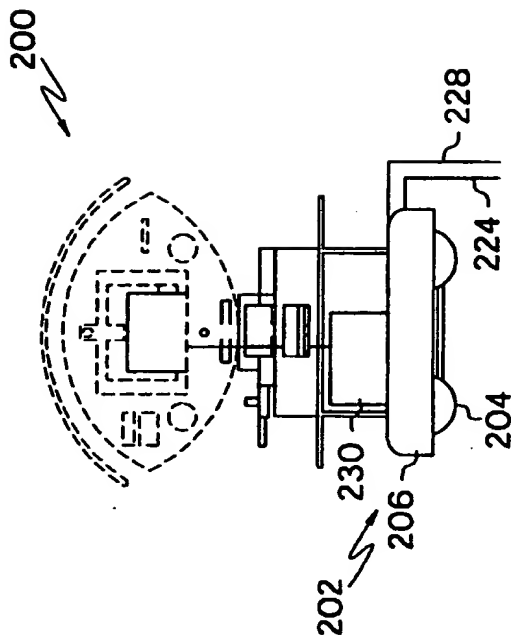
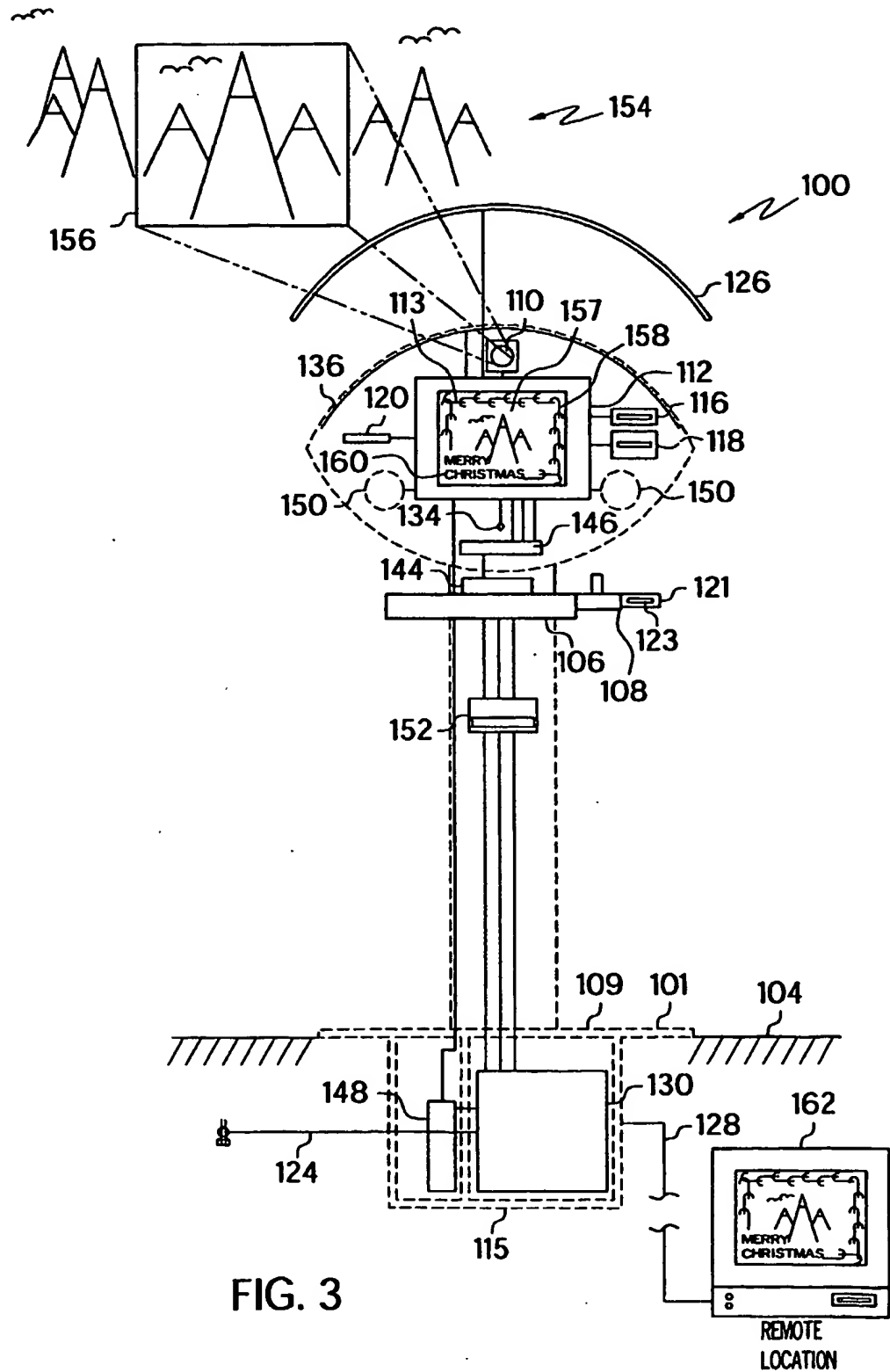


FIG. 2

2 / 13



3 / 13

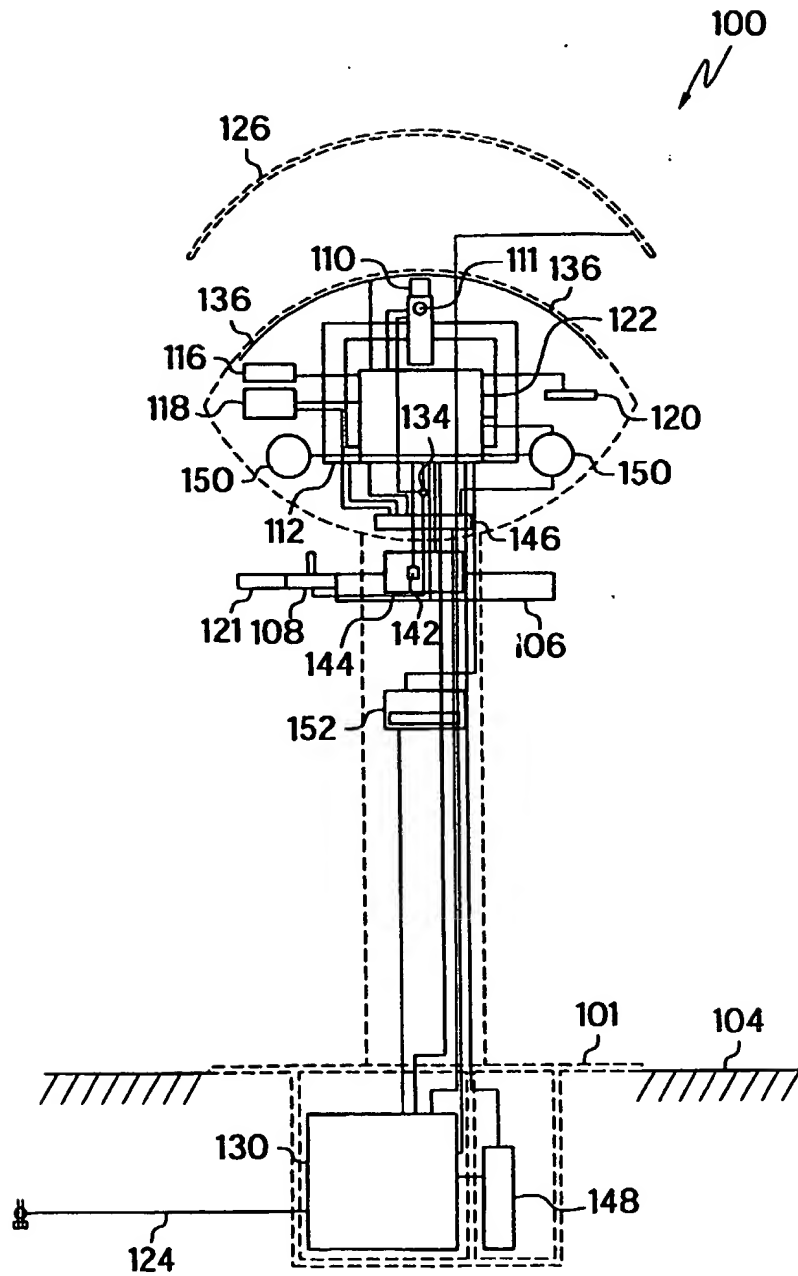


FIG. 4

4 / 13

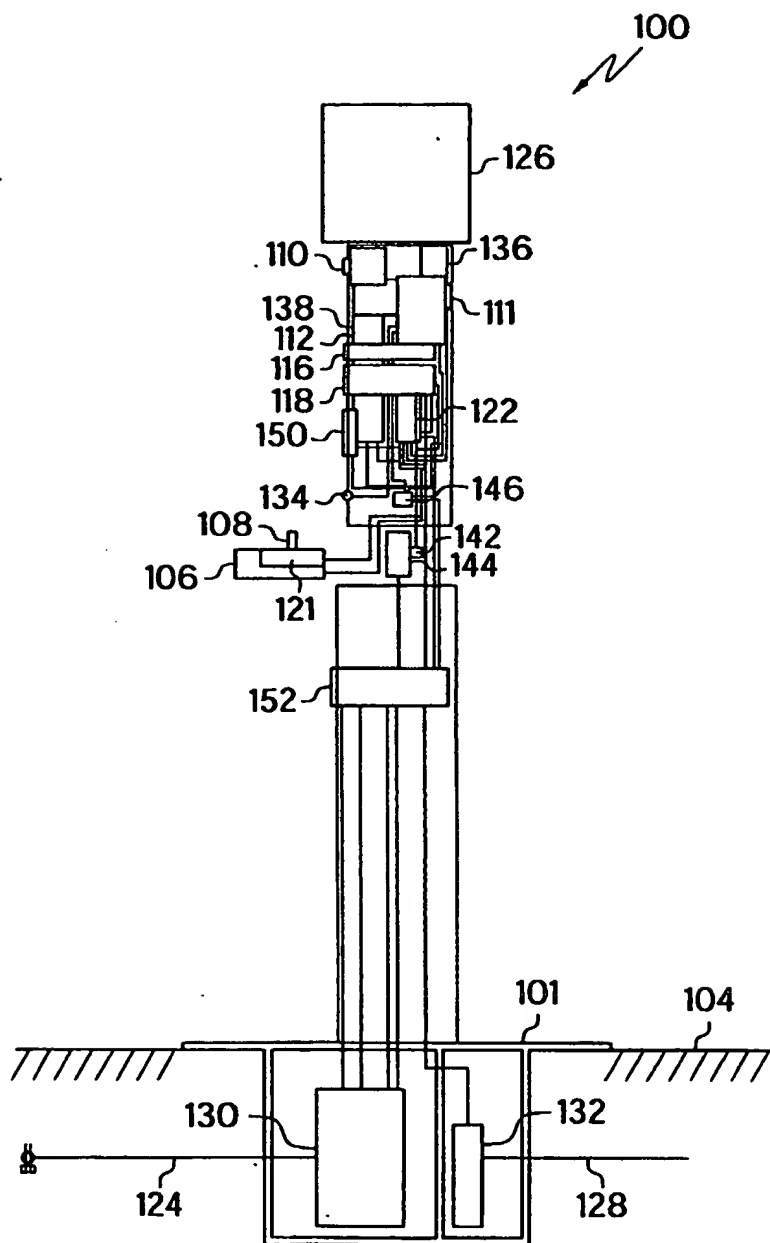


FIG. 5

5 / 13

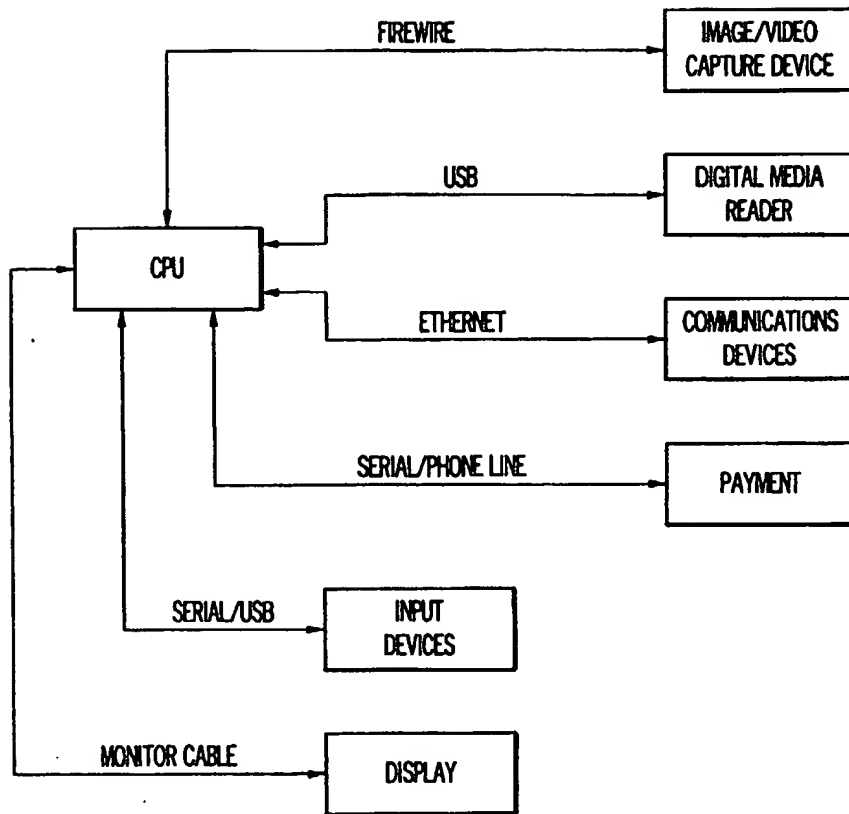
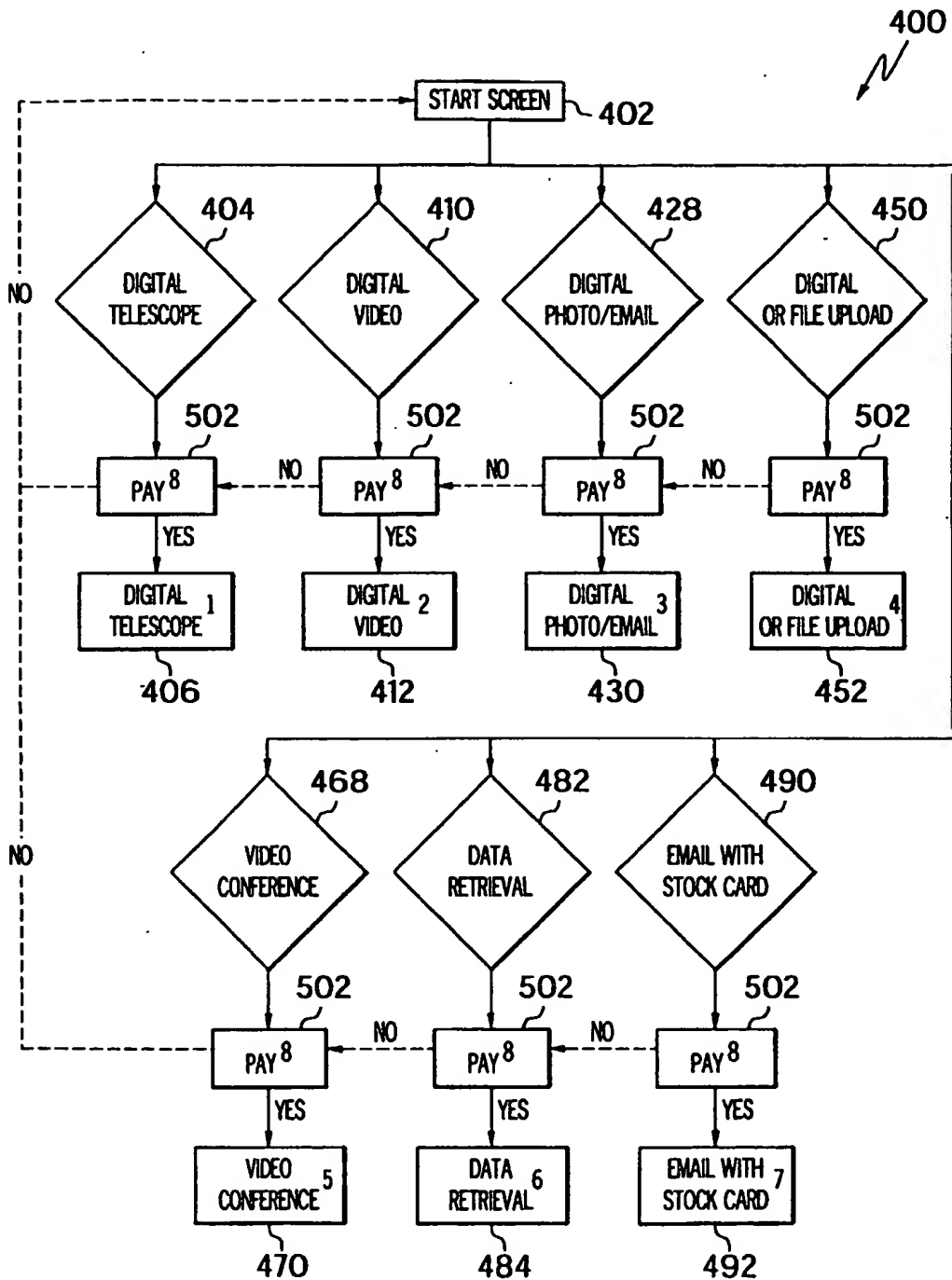


FIG. 6

6 / 13



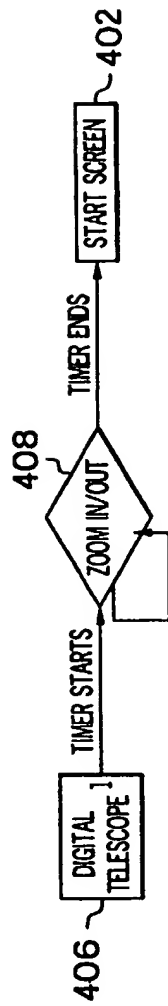


FIG. 8

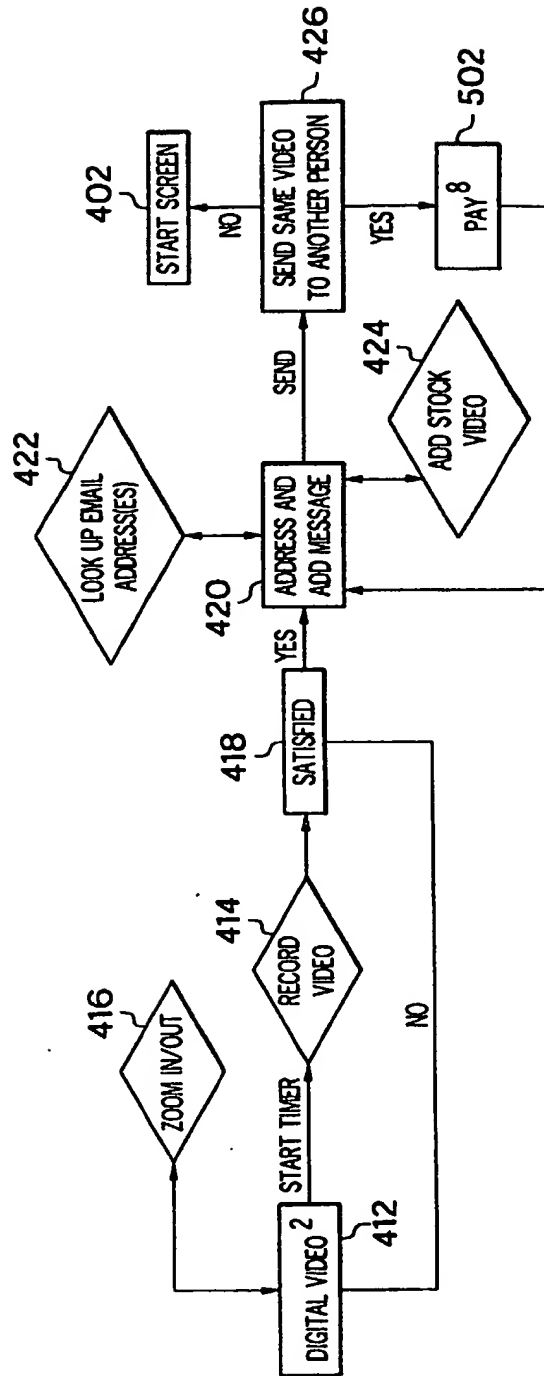


FIG. 9

8 / 13

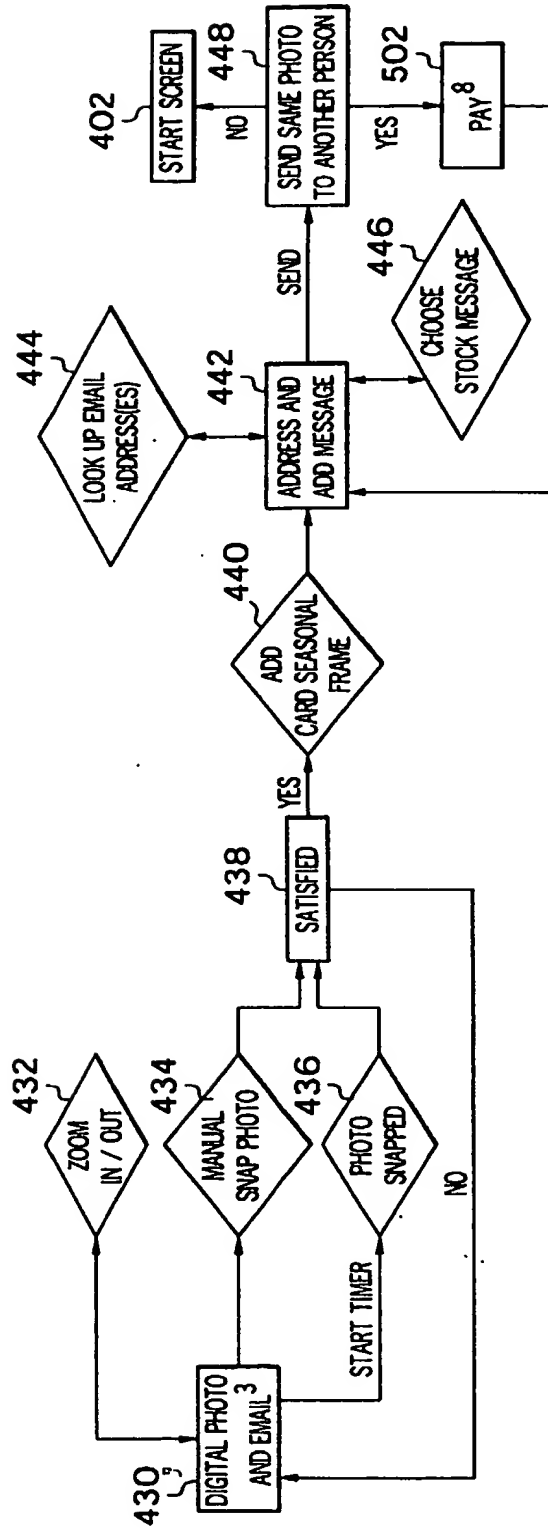


FIG. 10



9 / 13

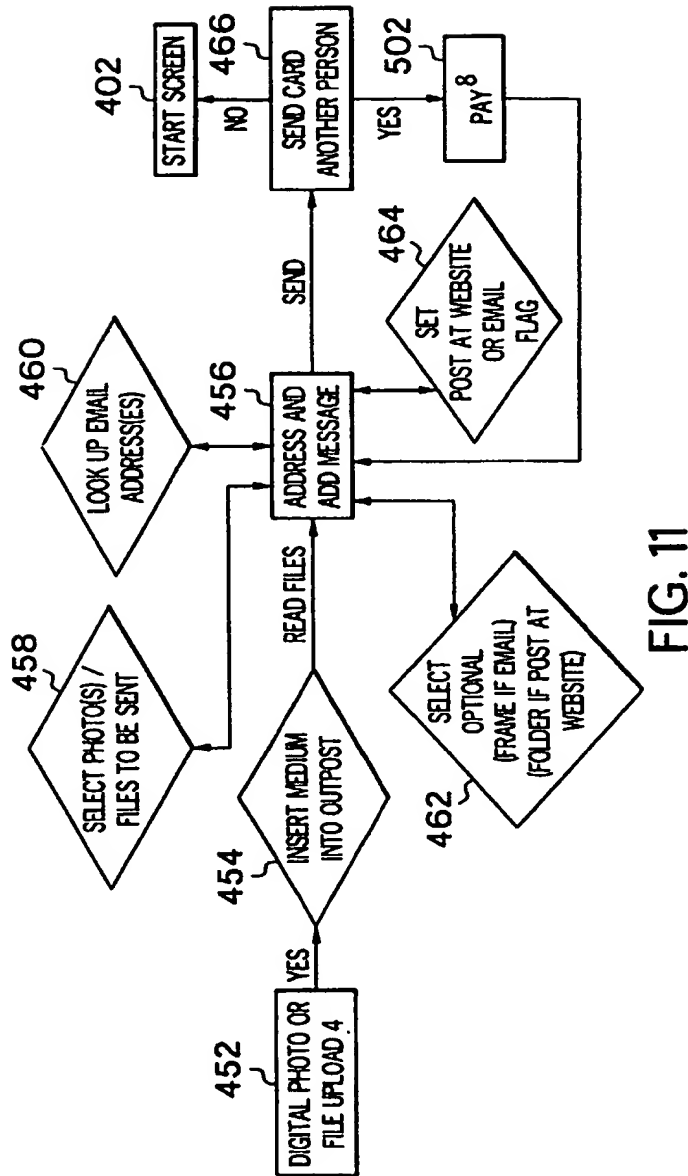


FIG. 11

10 / 11

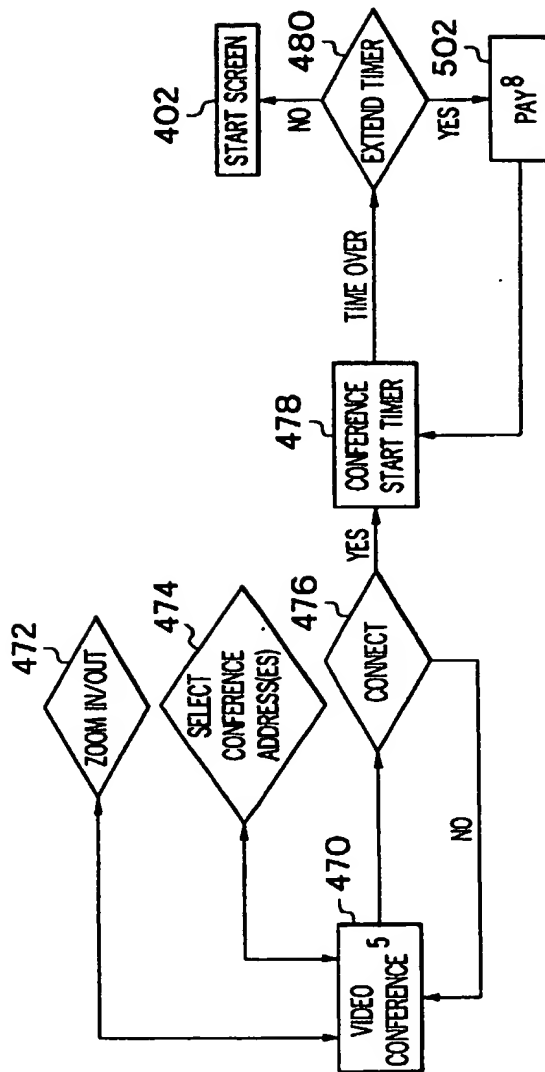


FIG. 12

11 / 13

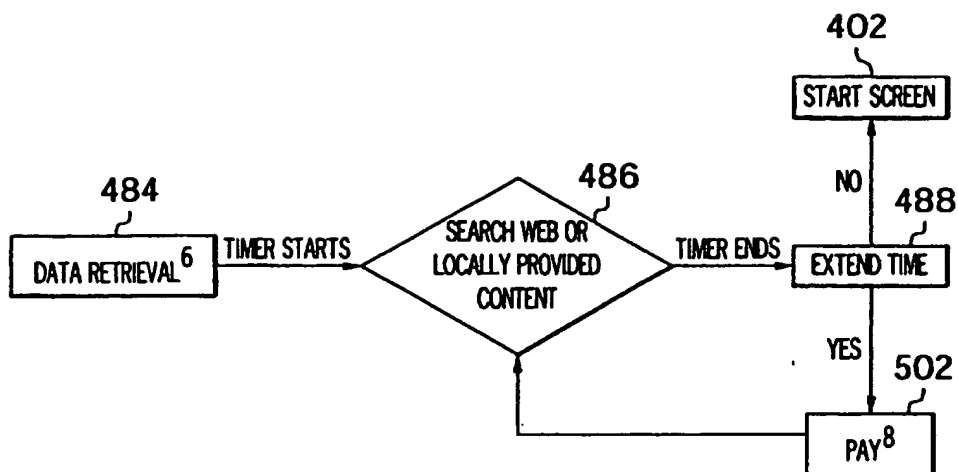


FIG. 13

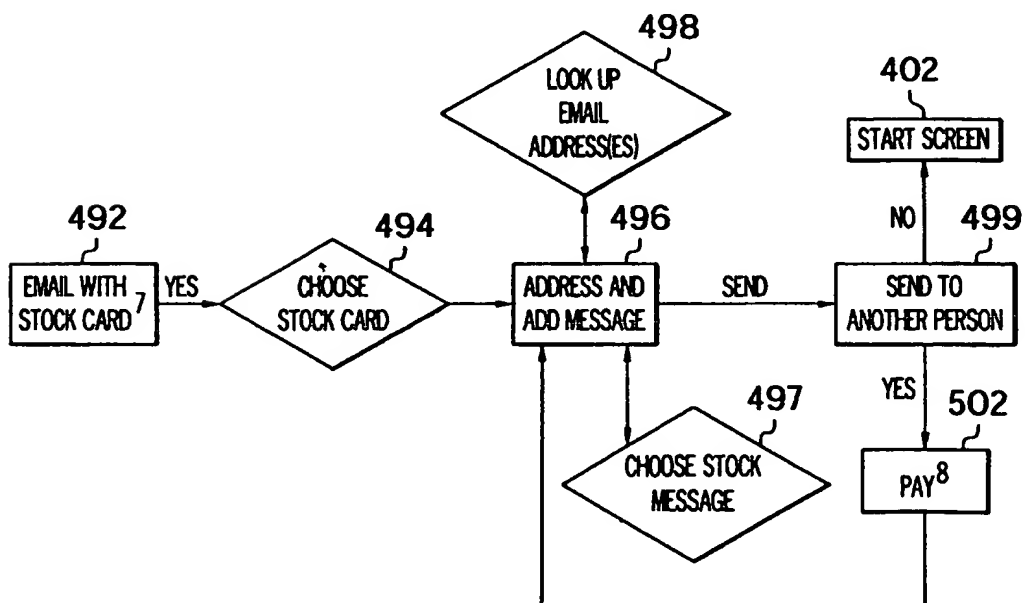


FIG. 14

12 / 13

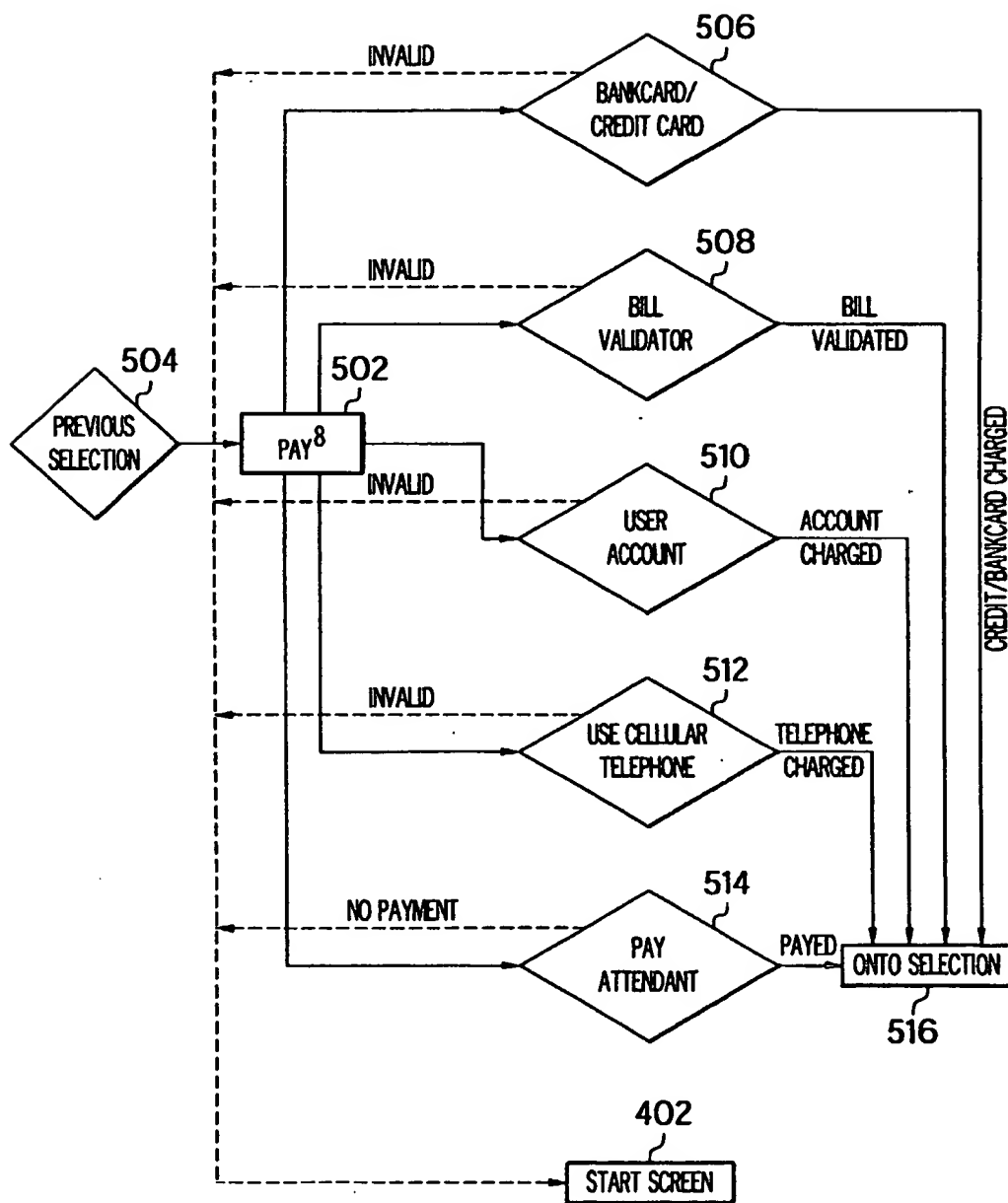


FIG. 15

13 / 13

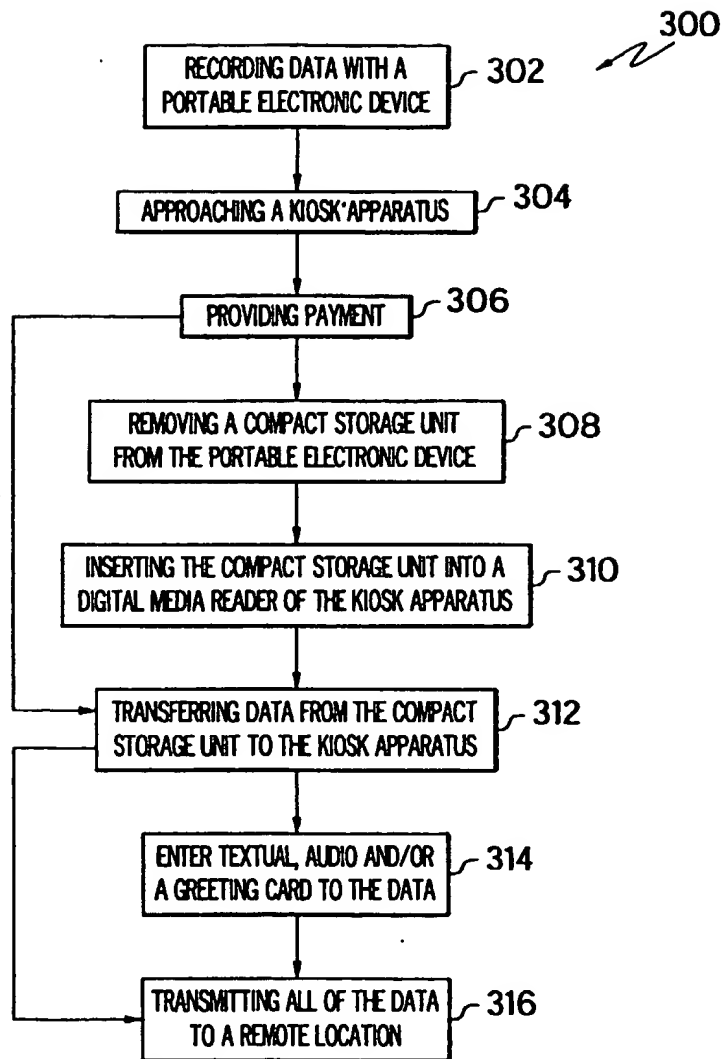
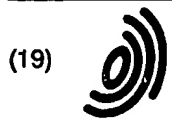


FIG. 16



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(71) Applicant: EASTMAN KODAK COMPANY  
Rochester, New York 14650 (US)

(72) Inventors:  
• Parulski, Kenneth A.,  
c/o Eastman Kodak Company  
Rochester, New York 14650-2201 (US)

• Ward, Joseph,  
c/o Eastman Kodak Company  
Rochester, New York 14650-2201 (US)  
• Hopwood, Michael C.,  
c/o Eastman Kodak Company  
Rochester, New York 14650-2201 (US)

(74) Representative:  
Lewandowsky, Klaus, Dipl.-Ing. et al  
Kodak Aktiengesellschaft,  
Patentabteilung  
70323 Stuttgart (DE)

(54) Electronic camera with "utilization" selection capability

(57) A digital camera includes a liquid crystal display (LCD) for viewing images captured from an image sensor and stored on a removable memory card. The LCD also presents a user interface (UI) that allows the user to create a print order "utilization file". As individual images are viewed, the user can decide how many (if any) prints to make of the image, the print size, and the print quality (low cost ink jet versus high quality thermal prints, for example). The memory card can then be inserted in a home printer, walk-up kiosk, or dropped off/mailed to a photofinisher, or the camera itself can be connected to the printer or kiosk via a wired or wireless (e.g., IrDA) link. The print order can then be automatically produced without any additional user intervention.

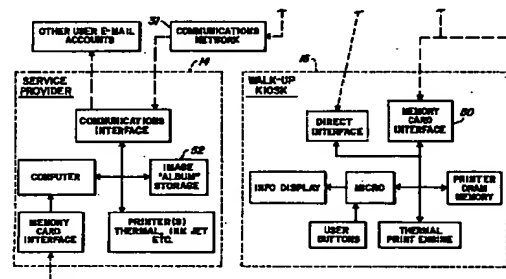


FIG. 1B

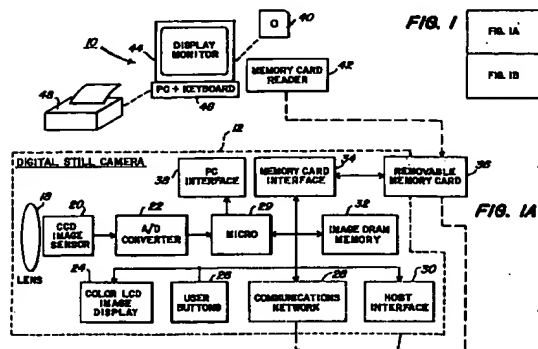


FIG. 1A

EP 0 860 980 A2

**Description****CROSS-REFERENCE TO RELATED APPLICATION(S)**

- 5 Reference is made to commonly assigned copending applications Serial No. 60/037,962, entitled "Network Configuration File for Automatically Transmitting Images from an Electronic Still Camera" and filed on the same date herewith in the names of Joseph Ward, Kenneth A. Parulski, and James D. Allen, and which is assigned to the assignee of this application.

**10 FIELD OF THE INVENTION**

The invention relates generally to the field of photography, and in particular to electronic photography. More specifically, the invention relates to a digital camera that can be interfaced with a host computer.

**15 BACKGROUND OF THE INVENTION**

Digital cameras, such as the Kodak Digital Science DC25™ camera, allow images to be utilized on a home computer (PC) and to be incorporated into e-mail documents and personal home pages on the World Wide Web. Presently, if a print is desired, each image must first be copied to the PC and then individually printed. The user is required to manually select each image to be printed, and manually decide how big each print should be and how many prints to make of each image.

In addition, it is possible for users to electronically send images to others using software, such as the Kodak Digital Science Picture Postcard Software™. However, this again requires the user to manually download each image to the host computer, select each image to be transmitted, and create a new "Postcard" for each image to be sent. Users can also create "albums" of photos on their computers using software such as the Family Album Creator™ by Creative Wonders, Inc. Again, however, this is a manual process that requires each image to be downloaded to the computer, individually selected, and added to the album.

In U.S. Patent 5,241,659, reprint information can be generated at the time a PhotoCD disc is played back. This patent describes an EEPROM card that can be inserted into a PhotoCD player. As shown in Figs. 3, 5, and 6 of this patent, the EEPROM card can contain reprint order information and "album disc" information input by the player operator. However, this information is not generated at the time of picture taking, and is not stored on the same media as the images. Moreover, the reprint information does not include information useful to the service provider, such as user account, charge card, mailing address, etc.

What is needed is a way for camera users to quickly and easily compose "print orders" and "transmission orders" and/or "electronic alburning" orders, at the time they capture their images.

**SUMMARY OF THE INVENTION**

The present invention is directed to overcoming one or more of the problems set forth above. Briefly summarized, according to one aspect of the present invention, the camera and system of our invention meets this need by allowing the user to select "downstream" services at the time of capture, using the camera's LCD screen and user interface. The digital camera includes a liquid crystal display (LCD) for viewing images captured from a CCD sensor and stored on a removable memory card. The LCD also presents a user interface (UI) that allows the user to create a print order "utilization file". As individual images are viewed, the user can decide how many (if any) prints to make of the image, the print size, and the print quality (low cost ink jet versus high quality thermal prints, for example). The memory card can then be inserted in a home printer, walk-up kiosk, or dropped off/mailed to a photofinisher, or the camera itself can be connected to the printer or kiosk via a wired or wireless (e.g., IrDA) link. The print order can then be automatically produced without any additional user intervention.

Alternately, a modem in the camera or card reader can transmit the utilization file and the image data to a print service provider, which can produce the prints and return them via mail to the user, or to a party designated by the user. The utilization file can alternately include e-mail addresses to allow images to be automatically sent to others, postal address information for sending print images, or alburning information to allow images to be placed in an on-line image database.

**55 BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a block diagram of the system according to the invention.

FIG. 2 is a diagram of downstream services available in the system shown in Figure 1.

FIG. 3 is an illustration of one example of a creative background added to an image.

FIG. 4 is a diagram of the organization of a utilization file.

FIG. 5 is a diagram of another organization of a utilization file together with each image file.

## 5 DETAILED DESCRIPTION OF THE INVENTION

Because imaging systems and devices are well known, the present description will be directed in particular to elements forming part of, or cooperating more directly with, apparatus in accordance with the present invention. Elements not specifically shown or described herein may be selected from those known in the art. Some aspects of the present description may be implemented in software. Unless otherwise specified, all software implementation is conventional and within the ordinary skill in the programming arts.

A system block diagram of the invention is shown in Figure 1, and includes a user's host computer(PC) 10, a digital camera 12, equipment located at a "downstream" service provider 14, and equipment at a walk-up kiosk 16. The camera 12 includes an optical section 18 for imaging a scene upon an image sensor 20 and generating an image signal, an A/D converter 22 for digitizing the image signal, a liquid crystal display (LCD screen) 24 for displaying images and other information, a number of user input buttons 26, and both internal memory 32 and a removable memory card 36 for storing captured images. The camera may optionally include an internal communications interface 28 (e.g. modem). A microprocessor 29 generally controls the operation of the camera 12, and interchanges data through a memory card interface 34 with the memory card 36, through a PC interface 38 with the host computer 10, through a host interface 30 directly with the kiosk 16, and through the communications interface 28 and a communications network 31 with the service provider 14.

When the camera is purchased, it is provided with a software application (located on a disc 40) for running on the user's host PC 10 that enables the user to specify the name(s) of downstream service providers, network addresses (friends, family or business associates) and related account information such as billing information (charge card number, mailing addresses, etc.). The user can also select, through the software application, one or more "creative backgrounds" offered by the service provider (such as a postcard border) and enter one or more text messages, (such as "Hi, I'm having a relaxing vacation, John Smith"), as will be described in connection with Figure 3. All of this information can then be downloaded, via a memory card reader 42 on the host PC 10, to the removable memory card 36, which can be subsequently inserted into the camera. Alternatively, the information can be downloaded to the camera 12 via the host PC interface 38 and written to the camera's internal memory 32 or the removable memory card 36 in the camera. Typically, keyword descriptors accompany the information to enable easy access by the camera user.

After placing the memory card 36 in the camera (or disconnecting the camera from the host PC 10), the user can operate the camera 12 to take numerous pictures, which are stored either in the internal memory 32 or in the memory card 36 (or in both). After taking pictures, the user reviews the images on the LCD screen 24, using the buttons 26 to scroll through the images. The user can then select the desired "downstream services" (printing, e-mailing, and/or albuming) and compose the order using the options listed in Figure 2. These services and options are accessed from the memory card 36 and, for example, the keyword descriptors are assembled in a menu and displayed on the LCD screen 24. Selections among these services and options are made, for example, by reference to the keyword descriptors and actuation of the user buttons 26. The details of the order information is written into a "utilization" file generated by the camera that identifies the order and includes pointers to the image files that store the images required to "fulfill" the order. The "utilization" file is stored in the internal memory 32 or the memory card 36.

For printing, order composition involves selecting the quantity, print size, and quality level (e.g., thermal or ink jet) of the images to be printed. For example, the user might choose one "standard" (4" x 6" size) image of 2 different images, and 2 standard size images plus one "enlargement" (8" x 10" size) image of their "favorite" vacation image. The print order information is provided in the utilization file that identifies the order and includes pointers to the image files that store the images required to "fulfill" the print order. In addition to "normal" type prints, the prints can be "creative" prints, using one of the creative backgrounds selected on the host computer and downloaded to the camera along with text. In this case, the "favorite" image might be surrounded with one of the border and captions provided via the host PC 10, as shown in Figure 3.

The user can then take or mail the image memory card 36 containing the image files and order information (utilization file) to the print service provider 14. The provider reads the information, fills the print order, and returns the print order either for pick-up by the user or by mail. The service provider 14 charges the user's credit card account (which can be stored in the print order information file) for the prints provided. Alternately, the user can place the card 36 in a slot 50 of a "walk-up kiosk" 16 along with a credit card. The kiosk can then automatically produce the prints required while minimizing the amount of user interaction required. Finally, the user could place the card in a home printer 48, and the printer could automatically produce the quantity of prints of each image required. In the last two cases, the size and quality of print types available might be limited to those available by the kiosk 16 or the home printer 48.

Alternately, the camera could incorporate or be connected to a wired or wireless modem, such as the communica-



tions interface 28. In this case, the print order information, and the image information needed to fulfill the print order, would be transmitted to the service provider 14 along with the account information through the communication network 31 (which could be a wired or wireless network). The service provider 14 would print the order and mail the prints back to the user.

Instead of, or in addition to, composing a print order, the user may choose to transmit one or more images to others. These images can include the "creative" images and/or text described above. The user selects the images and the person(s) who will receive them, from the group of addresses loaded into the camera via the process described earlier (the software application running on the home PC 10). The e-mail order information is provided in the utilization file that gives the e-mail address and includes pointers to the image files that store the images required to "fulfill" the e-mail order.

If the camera includes a transmitter, e.g., a cellular connection in the communications interface 28, the camera could include and initiate a "send" command that the user would enable after completing the e-mail order. This command would automatically send the appropriate images to the appropriate user's e-mail accounts through the network 31 using the appropriate communications protocol (FTP, mailto, etc.). Alternately, the camera can be placed in a docking unit (not shown) containing the modem. The images can then be automatically transmitted to the service provider 14, when the camera is inserted into the dock. Alternately, the memory card 36 could be removed from the camera and placed in a kiosk, which would then transmit the images and bill the user's charge card.

Instead of, or in addition to, composing a print order and/or an e-mail order, the user may choose to transmit one or more images to their "electronic photo album" account, which could be maintained by the service provider 14 (or alternately could be maintained on the user's home computer 10) in an image "album" storage 52. In this case, the user selects the images to be transferred to their photo album, and optionally selects what group of users might be allowed to view the images. The groups may include "Self only", "Self plus immediate family only", and "All" (family, friends, etc.) The information may include text, which may be input and selected as described in U.S. Patent No. 5,633,678, "An Electronic Still Camera for Capturing and Categorizing Images", filed December 20, 1995, and assigned to the assignee of the present application, and which is incorporated herein by reference.

Instead of having the camera 12 communicate directly to the "downstream" service provider 14 over the communications network 31, the communications network 31 from the camera 12 could alternately be connected to an internet service provider (ISP) (not shown) such as AOL (America On Line), Earthlink, Eznet, etc. The "downstream" service provider 14 would then be connected to all ISPs via the internet, eliminating the need to maintain a separate communications network. The ISP would transfer the utilization file data and images needed to order prints and album images to the downstream service provider. The ISP could itself handle e-mailing of images to other users, using the data and images in the utilization file.

The utilization order information is provided in the utilization file. The general file organization is shown in Figure 4, and a detailed example of the file contents of an elaborate utilization file is given in Appendix I. This file may be encrypted to prevent unauthorized use of the sensitive information, such as the user's credit card number. Referring to Appendix I, a Global information section (lines 2-26) provides the customer information (name, address, credit card), as well as the time the order was placed, and whether it has been processed or not.

The file may contain one or more Print Order sections. For example, lines 28-37 describe a print order of "standard" size (4" x 6") prints of the images made on a silver halide based CRT printer. Line 34 indicates that two copies of the image referenced in line 33 will be printed, while only one copy of the images referenced in lines 35-36 is printed. A second print order section (lines 39-55) indicates a large size print (24" x 36") should be made on a silver halide printer and mounted in particular in a walnut frame. This printer should be sent via UPS to the address shown in lines 47-52. The image is the composite shown in Figure 3, which is described in the CreativeDetail section (lines 76-90).

An e-mail order section (lines 57-65) provides the e-mail address and a list of images that should be sent to this address. An album order section (lines 67-72) provides a means for adding images to the users on-line photo album. The user can classify the images under a particular heading (e.g., "vacation" images) and indicate who is allowed to access the images via the internet.

A Creative Detail section (lines 74-90) defines each creative image, such as the image in Figure 3. It also describes user defined text (line 81). Multiple templates and user text options may be downloaded from the host computer to a memory card that is then inserted into the camera, prior to taking pictures. The template (background) may be an identification code that is only added, for example, during printing. In this case, the template is not viewed when the image is displayed on the camera. Alternately, a low resolution version of the templates desired by the user can be stored in the camera, so that the user can preview the final composite image. A high resolution version of the template can be used by the service provider to print the final composite image. The user may decide to crop and rotate the image (lines 86-87) prior to inserting it into the creative background.

Finally, an image detail section (92-102) describes the file type (e.g., FlashPix, JPEG, TIFF) and location of each image. In this example, the three images are all FlashPix images located on the memory card "Local Card" in the "vacation" folder.

Most of the information in GlobalInfo and CreativeDetail sections of the digital camera utilization file, for example the addresses and creative text, is downloaded from the host computer to the camera prior to picture taking. After reviewing the images, the user uses the image LCD and user interface to select which images to print, e-mail, and album. The print size, e-mail, albuming, and creative options are offered by pull-down menus that match the options provided by the service providers they have selected on the computer and downloaded to the camera (via the card). The full utilization file (Print order, e-mail order, etc.) is then created by the camera based on the user selections.

A much simpler print utilization file is shown in Appendix II. In this case, the camera simply allows a print order to be created. The memory card 36 containing the images and the simple utilization file is then inserted into the home PC 10, the home printer, or the walk-up kiosk 16 or sent to a service provider via a communications interface. The proper number of each selected image is then automatically printed, without further user intervention.

Instead of providing the utilization information for multiple images in a single utilization file, other embodiments are possible. For example, the camera may create three utilization files, one containing the information needed to produce a print order, a second containing information needed to provide electronic albuming, and a third containing e-mail order information. Alternately, the utilization information may be provided with each image file, as shown in Figure 5. In this embodiment, the print order information describing the number and size of each image to be printed is included in tags provided within each image file. For example, image file #1 contains the image data and a tag indicating that the user has requested one standard size print. Image file #2 does not contain a print tag (or alternately could include a tag with the number of prints set equal to zero) so no prints will be made of image #2. Image file #3 includes a first print tag indicating that the user has requested two standard size prints, and a second tag indicating that the user has also requested a single 8" x 10" size enlargement.

Other aspects of the invention include a digital printing system wherein the image utilization file includes the number of copies of at least one print, a digital printing system wherein the image utilization file includes the size of at least one print, a camera as wherein the image utilization data for the plurality of captured images is contained in a single utilization file, and a camera wherein the image utilization data for each of the plurality of captured images is contained within an image file.

The invention has been described with reference to a preferred embodiment. However, it will be appreciated that variations and modifications can be effected by a person of ordinary skill in the art without departing from the scope of the invention.

APPENDIX I: DIGITAL CAMERA UTILIZATION FILE

```

5      1 00000000 UTILIZATION ORDER SPECIFICATION (Non-zero initial number identifies encryption
      key)
      2 %Section: GlobalInfo
      3   %Section: ConsumerInfo (Provides info on camera owner and default mailing address)
      4       %Name: ~Smith~John~W~
      5       %Consumer ID: Njj1007
10      6       %Address:   ~1 Picture Avenue~
      7           ~Apartment 8b~
      8           ~PO Box 123~
      9           ~Anytown~
     10           ~State~
15      11       %PostalCode:~14650~
     12       %CountryCode:USA
     13       %Email:~jdoe@kodak.com~
     14       %PhoneDay: ~(716) 555-1111~
     15       %PhoneNight: ~(716) 555-2222~
20      16       %CreditCardExpDate: 1996 03 24
     17       %CreditCardNumber: 3030445643345
     18       %CreditCardType: AmericanExpress
     19   %EndSection: ConsumerInfo
     20
25      21   %Section: OrderInfo   (Provides information on when utilization file was created)
     22       %Date: 1996 2 28
     23       %Time: 14 22 29
     24       %Processed: 0 (1 Indicates that this utilization order was processed)
     25   %EndSection: OrderInfo
30      26 %EndSection: GlobalInfo
     27
     28 %Section: PrintOrder      (Lists the images in a print order)
     29   %Section: FinishInfo
     30       %ImageOutputSize: 4 6 Inches (This example is for standard size prints)
     31       %MediaClass: AgX 20 EN34 Glossy
35      32   %EndSection: FinishInfo
     33       %ImageRef: ImageDetail1 (Points to images defined below)
     34       %Quantity:2   (Optionally indicates number of copies, default=1)
     35       %ImageRef: ImageDetail2
     36       %ImageRef: ImageDetail3
40      37 %EndSection: PrintOrder
     38
     39 %Section: PrintOrder
     40   %Section: FinishInfo
     41       %ImageOutputSize: 24 36 Inches (This example is for a large creative print)
45      42       %MediaClass: AgX 20 EN34 Glossy
     43       %FrameType: F134 Walnut
     44   %EndSection: FinishInfo
     45   %Section: ShippingInfo (Instructions to ship to an address other than the one in
      GlobalInfo)
50      46       %ShippingCarrier: UPS
     47       %Name: ~Good~Johnny~B~
     48       %Address:   ~1 Song Street~

```

49                   ~Mytown~  
 50                   ~State~  
 51           %PostalCode: -00111-  
 5   52           %CountryCode: USA  
 53    %EndSection: ShippingInfo  
 54    %ImageRef: CreativeDetail1   (Points to creative defined below)  
 55 %EndSection: PrintOrder  
 56  
 10 57 %Section: EmailOrder       (Sends images via e-mail)  
  
 58    %Section: AddressInfo (Instructions to ship to an address other than the one in  
       GlobalInfo)  
  
 59       %Name: -Good--Johnny--B-  
 15 60       %Email: -jgood@localnet.net-  
  
 61    %EndSection: AddressInfo  
 62    %ImageRef: CreativeDetail1   (Points to creative defined below)  
 20 63    %ImageRef: ImageDetail2  
 64    %ImageRef: ImageDetail3  
 65 %EndSection: EmailOrder  
  
 25 66  
 67 %Section: AlbumOrder       (Add these images to on-line photo album)  
 68    %AlbumHeading: -Vacation images- (Place images under "vacation" album heading)  
 69    %AlbumViewing: All       (gives access to all authorized album viewers)  
 30 70    %ImageRef: CreativeDetail1   (Points to creative defined below)  
 71    %ImageRef: ImageDetail2  
 72 %EndSection: AlbumOrder  
 35 73  
 74 %Section: CreativeDetail 1       (Describes each composite image)  
 75  
 40 76    %LayoutRef: T12345       (Indicates template ID or template image file)  
 77    %Section: PageInfo  
 78       %PageRef: 0  
 45 79    %Section: TextInfo       (Indicates what text appears in the template)  
 80       %TextNodeRef: 1  
 81       %ConsumerText: -Hi, I'm having a relaxing time on vacation. John Smith  
 82    %EndSection: TextInfo  
 50 83    %Section: ImageInfo       (Indicates which images(s) appear in template)  
 84       %ImageNodeRef: 2

55

85                   %ImageDetailRef: 1  
5     86                   %CropRect: 256 0 768 1280 (Cropped image top, left, width, height)  
87                   %Rotate: 90 (Indicates rotation in degrees clockwise)  
88                   %EndSection: ImageInfo  
10    89       %EndSection: PageInfo  
90    %EndSection: CreativeDetail  
91  
15    92   %Section: ImageData (Describes each image, may be referenced multiple times)  
93       %Section: ImageDetail 1  
94           %FileType: FlashPix Version 2.0  
20    95           %ImageLocation: LocalCard-Vacation/Image4.FPX-  
96       %Section: ImageDetail 2  
97           %FileType: FlashPix Version 2.0  
25    98           %ImageLocation: LocalCard-Vacation/Image7.FPX-  
99       %Section: ImageDetail 3  
100           %FileType: FlashPix Version 2.0  
30    101           %ImageLocation: LocalCard-Vacation/Image10.FPX-  
102    %EndSection: ImageData  
35

## APPENDIX II: SIMPLE PRINT ORDER UTILIZATION FILE

40  
1    %Section: PrintOrder           (Lists the images in a print order)  
2       Image4.FPX     1           (One copy of image 4)  
3       Image7.FPX     2           (Two copies of image 7)  
45    4       Image10.FPX    1  
5       Image12.FPX    4  
6       Image13.FPX    1  
7    %EndSection: PrintOrder  
50

## 55 Claims

1. An electronic still camera for capturing images that can be downloaded to a utilization service provider for utilization, said camera comprising:

a sensor for capturing images;  
a memory for storing the captured images;  
means for displaying the captured images;  
a user interface for selecting captured images to be utilized;  
5 means for generating an image utilization file; and  
means for storing the image utilization file along with the images in said memory and conveying this information  
to a utilization service provider.

2. The camera as claimed in claim 1 wherein utilization includes providing prints of the selected images in various  
10 sizes, quantities, and/or quality levels.

3. The camera as claimed in claim 1 wherein utilization includes providing the selected images to selected e-mail  
accounts.

4. The camera as claimed in claim 1 wherein utilization includes providing the selected images to an image database  
15 server.

5. The camera as claimed in claim 1 wherein the utilization information includes a user account number, charge card  
number, and/or mailing address.  
20

6. The camera as claimed in claim 1 wherein the utilization information for at least one image includes a text string  
and/or a creative background.

7. The camera as claimed in claim 1 wherein the images and image utilization file are stored in the same removable  
25 memory.

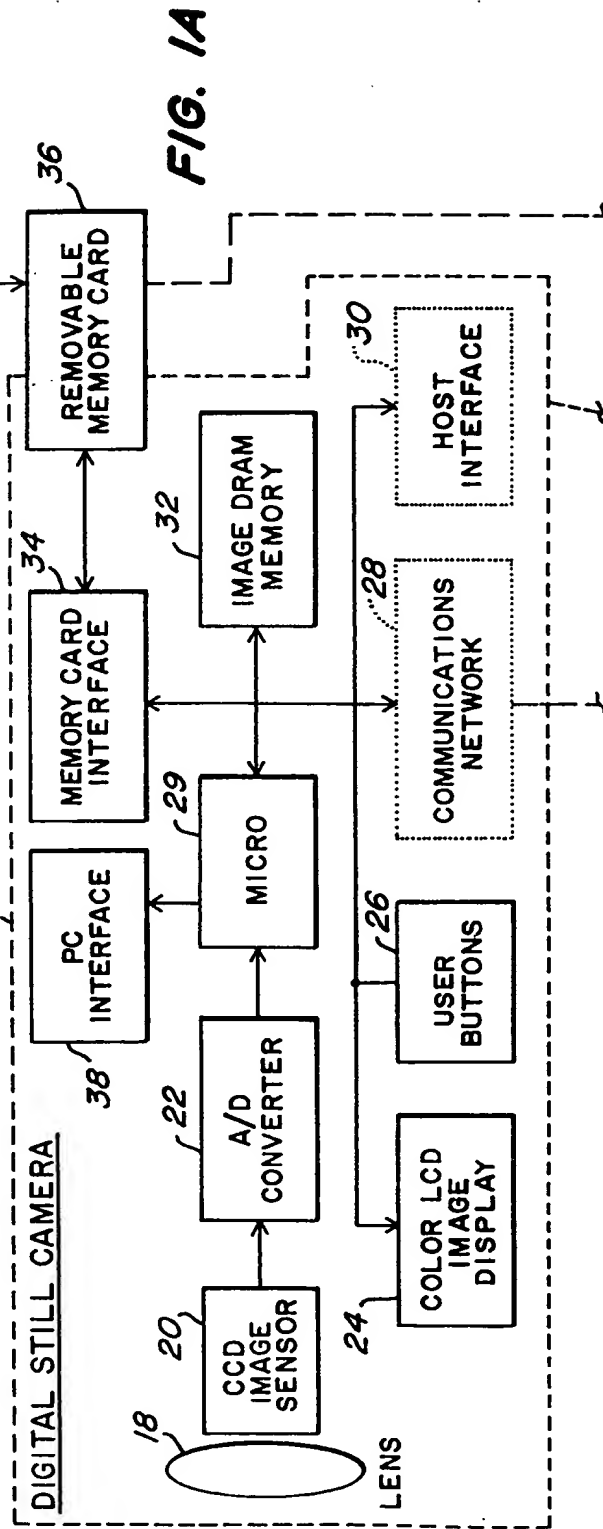
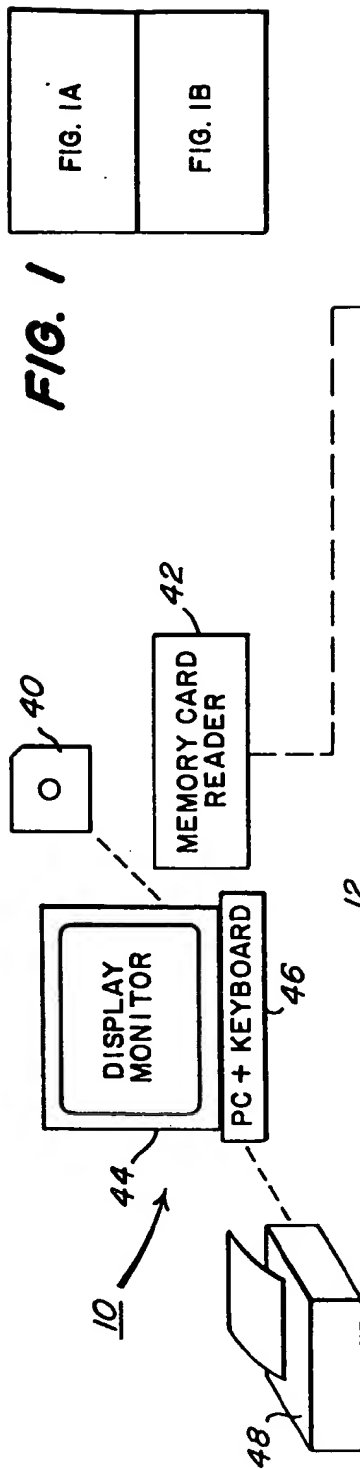
8. A digital printing system comprising:

means for producing hardcopy prints of digital images;  
30 means for reading image files from a digital memory device;  
means for reading an image utilization file from said digital memory device; and  
means for automatically controlling the hardcopy print means to produce the image order according to the  
information contained in said image utilization file.

9. The digital printing system as claimed in claim 8 wherein the image utilization file includes at least one of a user  
35 account number, charge card number and mailing address.

10. An electronic still camera for capturing images that can be downloaded for printing, said camera comprising:

40 a sensor for capturing images;  
a memory for storing the captured images;  
a user interface for selecting a plurality of captured images to be printed;  
means for generating image utilization data for printing a plurality of captured images; and  
45 means for storing the image utilization data and the plurality of captured images in said memory.



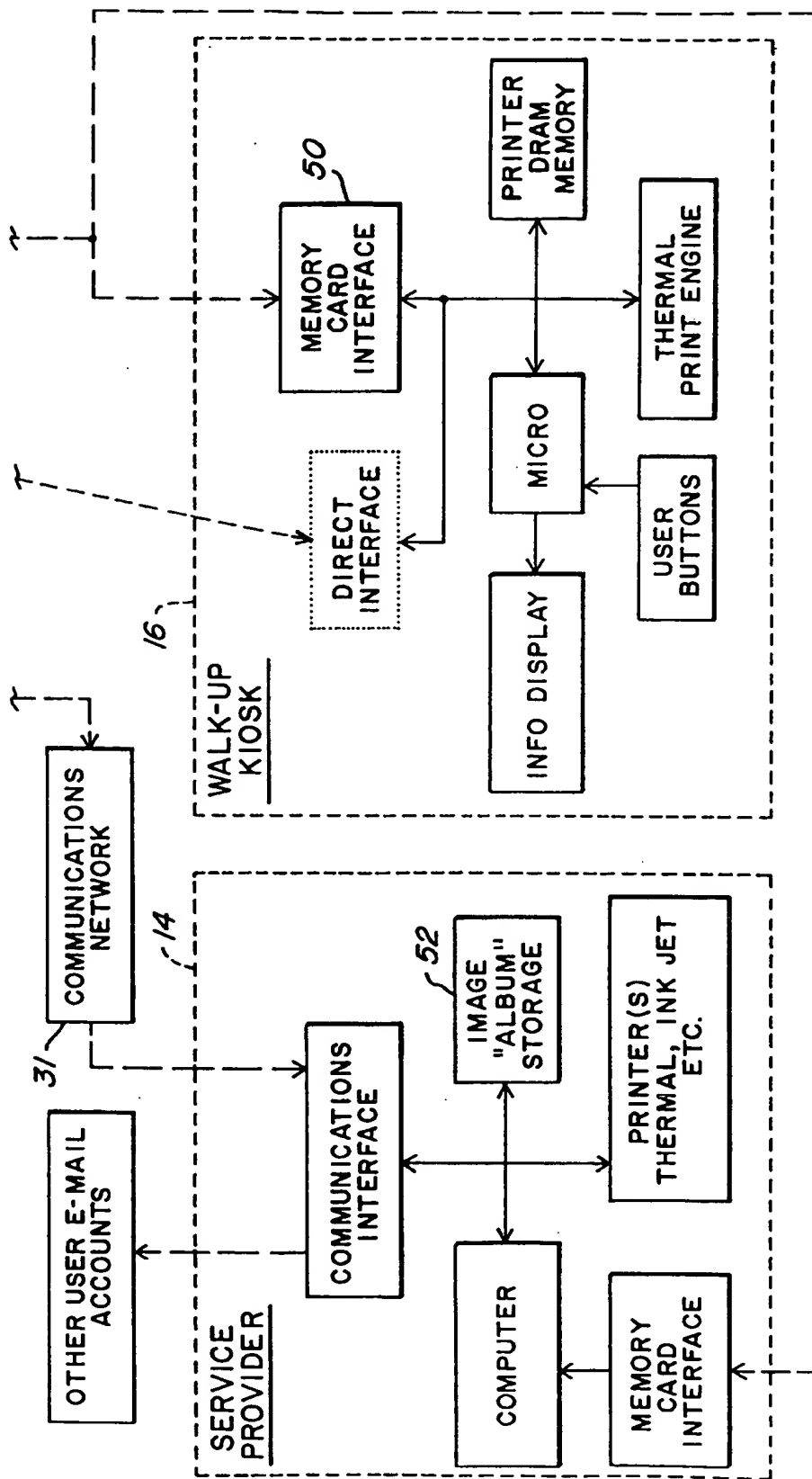


FIG. 1B



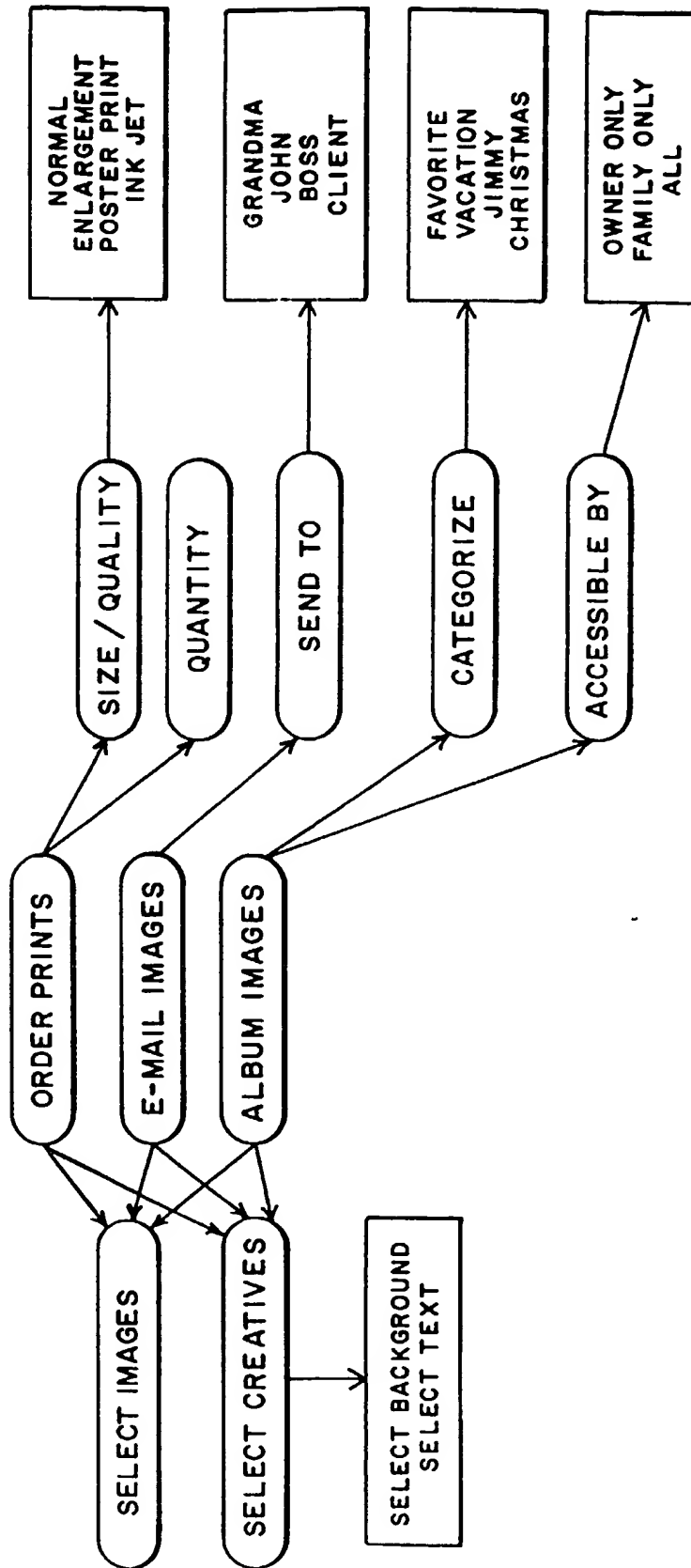
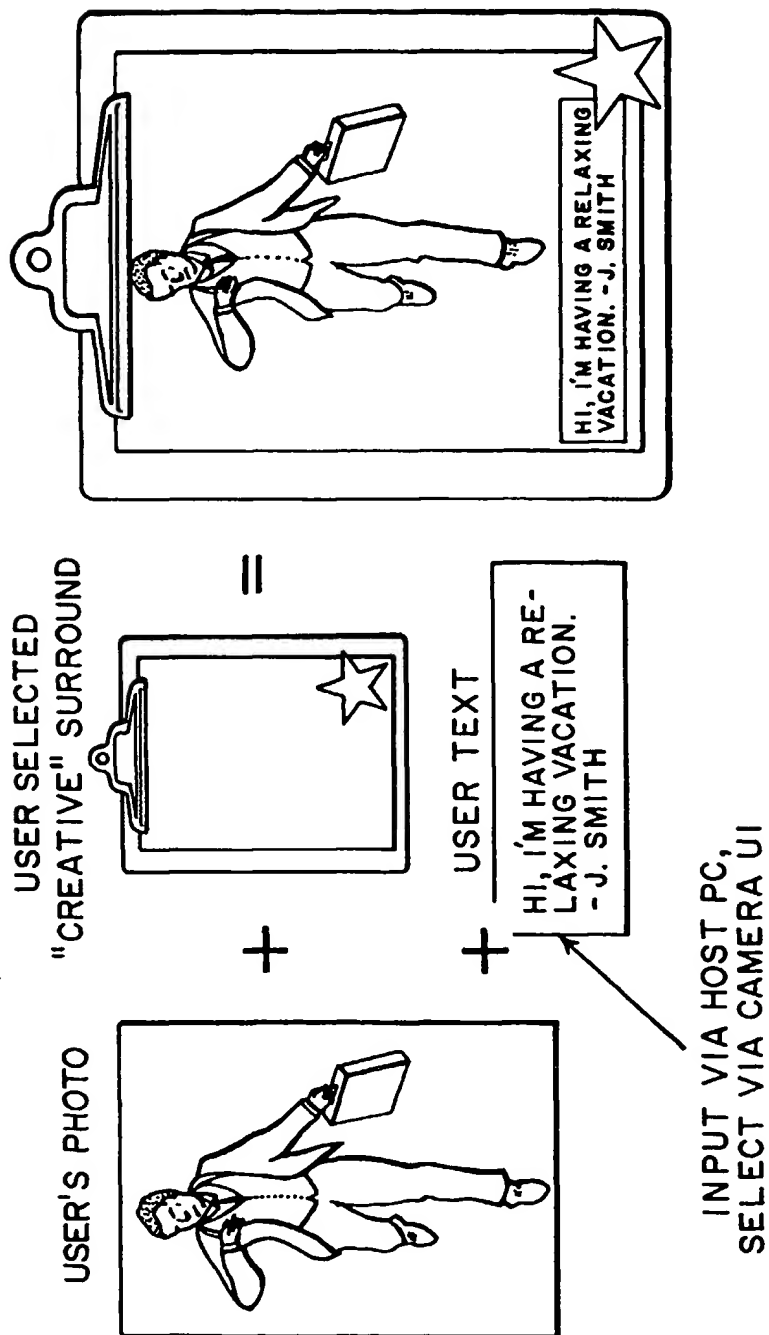
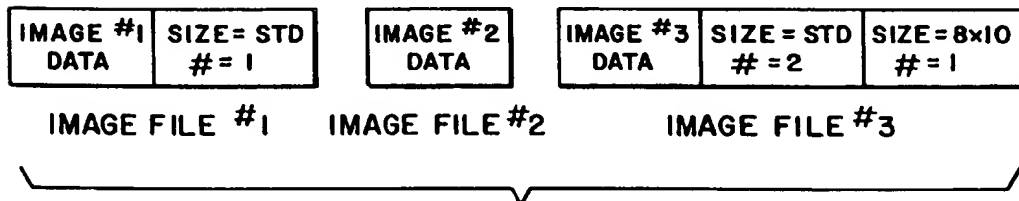


FIG. 2



**FIG. 3**

— GLOBAL INFORMATION — (CUSTOMER NAME, ADDRESS, BILLING INFO, ORDER DATE)
— PRINT ORDER INFO — (SIZE, NUMBER OF COPIES, IMAGE REFERENCES)
— E-MAIL ORDER INFO — (E-MAIL ADDRESS, IMAGE REFERENCES)
— ALBUM ORDER INFO — (ALBUM HEADING, ACCESS, IMAGE REFERENCES)
— CREATIVE DETAIL — (TEMPLATE, USER TEXT, IMAGE REFERENCE, IMAGE CROPPING)
— IMAGE REFERENCES — (IMAGE FORMAT, IMAGE LOCATION)

**FIG. 4****FIG. 5**

# Bolts

EDITED BY BRENDAN MAHER

## Direct Marketing University

By Bill Baird

### The E-Marketer's Swipe File: Cutting-Edge Intelligence for the New Economy

Wouldn't you love to have 50 industry insiders bring you proven breakthrough e-marketing ideas every week for free? This month's DM University will tell you how.

But these "insiders" aren't consultants or coworkers. They're e-mailboxes. And with a little ingenuity, you can use them to collect a "swipe file" of competitive intelligence and cutting-edge marketing practices. Just follow these five steps:

1. Identify the large companies to watch. Ask the experienced marketers you admire most, as well as your list broker and e-mail lettershop vendor, to help. They can point you to the largest and most innovative mailers. Those who spend the most money probably do the most testing, so you can learn from their behavior by watching what they test and roll out.

2. Create multiple e-mail addresses. Find out from your Web site hosting service, e-mail service provider or in-house IT people how you can create additional mailboxes on your server. Then create an identity for each mailbox address. Each identity should represent different age, gender, income, purchase or lifestyle characteristics. Keep a record of these identities for later reference.

3. Register these e-mail addresses on your chosen Web sites. You can "seed" your name onto other companies' e-mail files by registering as a visitor, buying a product or buying multiple products. Use a different identity for each type of activity so that you can see how they market to each type of customer over time. You'll have to experiment, however, to see if they'll accept your credit card number with a name that's not an exact match to the name on the card. Some will, and some won't.

4. Use the filters in your e-mail program to organize

the chaos. Sort them by company and then chronologically for easy analysis.

5. Each month, analyze the samples you've saved. Look at how the copy differs between your identities, as well as how it's changing over time. What patterns emerge in creative, offer, customization and frequency strategies?

Assume that new roll-out versions are probably working better than their predecessors. Then draw conclusions about why the new strategy works better.

#### Other Uses

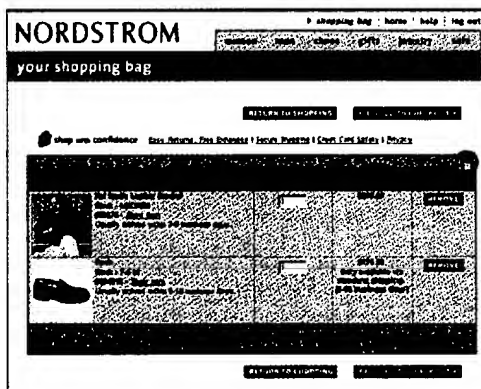
Also examine the outside offers that they are mailing repeatedly to their customers over time. Why do you think these types of offers work when e-mailed to this file? This provides clues to smarter list selection techniques.

One last source of great intelligence is to use these identities to monitor changes in a Web site's content customization strategy. Log on to the site on a regular basis as your female identity, for example, and grab a screen shot of the home page. Then log out and back in again as your male identity and grab that same screen shot. Do this for a few days, then print them out and compare the screens to one another. See any logical pattern to the differences in copy, offers or content? If so, why do you think they're working?

Over time you'll innovate new practices of your own. And

the first sign that you've succeeded will be the day when you open your morning e-mail ... and discover that someone else has been copying you.

Bill Baird provides strategic planning, analysis and resource development to the direct marketing industry. Specializing in direct mail acquisition, retention marketing and permission e-mail, he can be reached at (203) 912-8958. Or visit [www.bairddirect.com](http://www.bairddirect.com).



**STEAL SMART:** Our swipe file analysis discovered a smart change to this e-marketer's order form. It added thumbnail product photos to its order form to reduce the rate of abandoned sales.

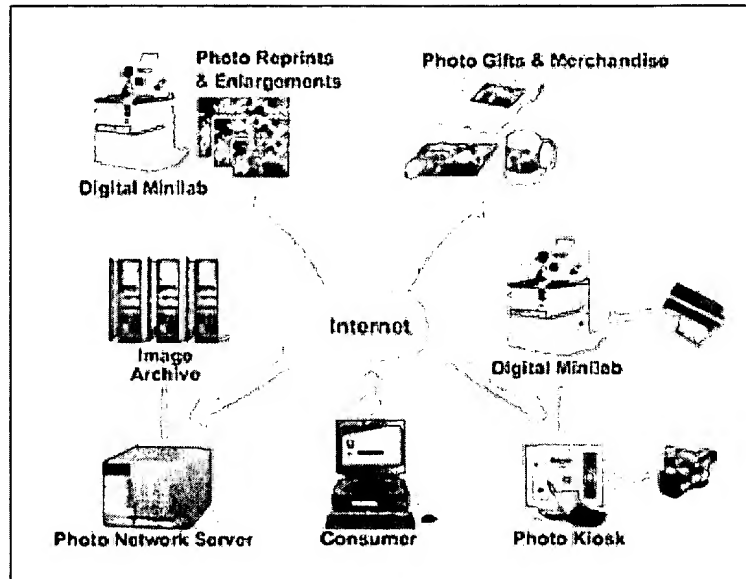


The complete imaging and e-commerce

# Telepix Photo

The convergence of film technology with digital imaging, PCs and the Internet has created a new industry sector of Internet imaging. While more and more consumers enjoy viewing, sharing, editing and reordering pictures over the Internet, retailers and photofinishers alike have to meet the challenge to provide the right services to their customers in the right way.

Telepix of Toronto, Ontario, Canada, provides complete end-to-end website management to photofinishers of all sizes, encompassing website creation and administration, provisions of server storage and e-commerce transactions.



Founded in October 1996, Telepix became part of the Gretag Imaging Group at the end of last year. The company not only commands 60 percent of the retail market in Canada, it has also entered the international arena, providing solutions to customers such as District Photo in the United States, the largest Internet photo e-commerce provider, CeWe Color, the largest photo processor in Europe, and InfoMagic Systems Pte., a total digital solutions provider to minilabs in Southeast Asia.

Most recently, Telepix won a contract with The Boots Company, the UK's leading retailer of health and beauty products and one of the country's biggest film processors, to develop and run bootsphoto.com, the company's innovative e-photo service.

## Comprehensive solution

Telepix' technology allows photofinishers, retail outlets and chains to offer customers the ability to view, share, edit and reorder pictures over the Internet via innovative photo-sharing services. Consumers can place rolls of film on the Internet for others to see, put images from digital cameras and scanners on the worldwide web, get all their pictures on CD-ROM and obtain high-quality prints of digital images. Private label branding makes sure that all the services are marketed under the retailer's or photofinisher's own name – enhancing customer loyalty.

Since Telepix' solutions feature a flexible open architecture design, they can be easily tailored to different workflows and customers, ranging from the

stand-alone (digital) minilab locations, through large-scale photofinishing facilities, to fully networked multiple-hundred outlet retail kiosk operations.

## Telepix Factory

The Telepix Factory software, for example, is a digital photo production solution that helps photofinishers and retail minilabs to enter the digital imaging market without a huge system investment.

Designed as a "back-lab" scanning and production facility, Telepix Factory is adaptable to the needs of both minilabs (single roll) and production labs (spliced rolls). Integrating seamlessly with existing hardware and available in a variety of affordable configurations, it enables the addition of digital products and services to any current offerings without interrupting the workflow.

These include high-resolution scans to disks and CDs, index prints, high-quality digital prints and enlargements, photos on the Internet and a wide selection of photo gifts and merchandise. While photos on CD are becoming more and more popular among the consumers, enjoying the digital images can be even more fun with the Telepix FotoPoint photo editing software, which includes an integrated photo data base, templates for photo calendars, borders, frames and other photography peripheral products and much more.

It can be easily integrated in a Telepix Factory under the customer's own brand.

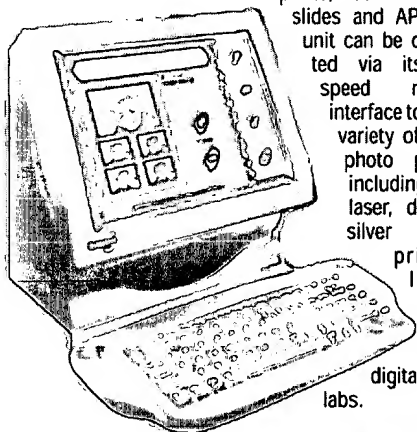
solution for photofinishers and retailers

# Photo Network

## PhotoStation 2000

For anyone looking for an all-in-one digital imaging workstation in a unique space-saving design to fit a photo retailer's floor and counter space, Telepix has the PhotoStation 2000 kiosk solution. This compact system accepts image data from digital cameras, photos on CDs and photo floppy disks. Flatbed and film scanner support enables input from traditional

prints, 35 mm film, slides and APS. The unit can be connected via its high speed network interface to a wide variety of digital photo printers including inkjet, laser, dye-sub, silver halide printers, large format printers and digital mini-labs.



With the Telepix Touch-Screen software, consumers can quickly and easily select digital image files for single, multiple and package photo print output, including photo album pages. Measuring only 10.5 inches wide, 8 inches deep and 11 inches high and weighing approximately 15 pounds, the unit is ideal for counter-top use in any photo retail environment. The integrated 13-inch active matrix touchscreen has a display resolution of 1,024 x 786 pixels, yet consumes up to 70 percent less energy than commonly used CRT monitors. The screen has been treated for anti-glare and features a motorized drive that ensures an ideal viewing angle. Designed to operate under Microsoft Windows 2000, the PhotoStation 2000 comes with the operating

system and application software pre-installed. Since the system is already enabled for Internet connectivity to the Telepix Photo Network, it can also become a physical portal to the retailer's photo e-commerce website. Supporting over 50 image file formats, it also enables basic image enhancement functions such as color balance control, brightness/contrast adjustment and red-eye removal. Image conversion to black and white, sepia, and other color tones will entice consumers to order different versions of their favorite shots.

## Digitizing existing prints

With Telepix' new PhotoChute system, which will become available in fall this year, photo retailers and photofinishers can even generate digital business from previous conventional D+P jobs. The integrated solution quickly converts photo prints into digital products. When customers take their prints to the PhotoChute enabled retailer, their photos are scanned at a rate of over two hundred 4" x 6" prints per hour. They can then be uploaded to a secure site on the Internet, saved to a floppy disk or CD, or printed out as reprints or index prints. To operate the system, an assistant simply loads the prints into the input tray on the scanner, selects the desired digital service and



Enjoying digital technology: Telepix's VP of Sales and Marketing, Kyle Hall, and his children are happy to get their family photos digitized on a Picture CD, ready for e-mail sharing, manipulation on a PC and archiving.

## Targeting the European market

INTERNATIONAL CONTACT took the opportunity to talk to Graeme Williams, Head of Telepix' European Operations, about the company's vision for online imaging services in Europe.



INTERNATIONAL CONTACT: Mr. Williams, what makes you so confident that Internet imaging is a real market opportunity for photofinishers and retailers?

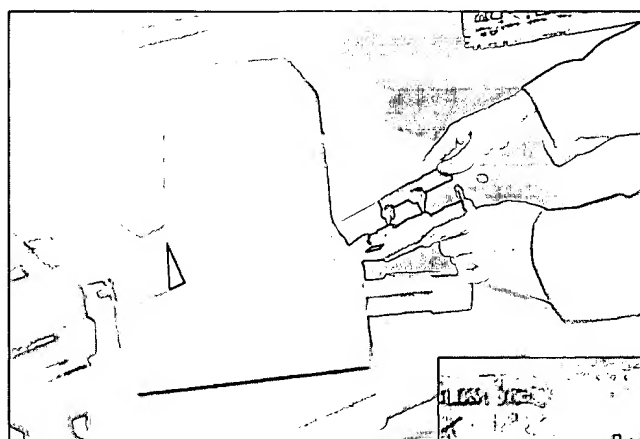
Graeme Williams: The Internet is penetrating the international markets faster than any technology in human history. Experts estimate that in North America alone, there are approximately 80 million people online, and even more own a PC. Market analysts forecast that by the year 2001, some 44 million rolls of film will be uploaded to the Internet compared to 100,000 in 1997.

Usage of the Internet in Europe has been somewhat behind the United States during recent years, but the old continent is catching up rapidly. With the dramatically growing sales of digital cameras and the increasing interest of consumers in pictures on storage media such as CDs, there is no doubt that the demand for online imaging services will be increasing significantly in the near future. That's why leading companies in the photofinishing and retailing sector are investing heavily in Internet imaging services.

INTERNATIONAL CONTACT: Your European customer list includes large enterprises such as The Boots Company and CeWe Color. Is Internet imaging for the big players only?

Graeme Williams: Not at all. We often do made custom-branded solutions even for the standard mom-and-pop shop. Thanks to the network, even the Telepix system can grow with the customer. In general, it is a mistake to think that Internet activities are reserved for the big players only. Just the opposite: The worldwide web is a tremendous opportunity for small companies to spectacularly

**Graeme Williams:** We strongly believe that digital and traditional imaging technology will coexist and strive together to deliver expanded use of pictures. As you know, our company is part of the Gretag Imaging Group, which offers the most comprehensive range of photo-finishing and digital imaging systems in the world. This clearly puts us in a position to benefit from the synergy between silver halide and digital imaging and to offer solutions for virtually any workflow you can imagine at a picture or image service provider.



*The new Telepix  
PhotoChute system  
is a complete  
hardware (software) solution,  
which makes it easy  
for retailers and  
photofinishers to  
convert photo prints  
into digital products.*

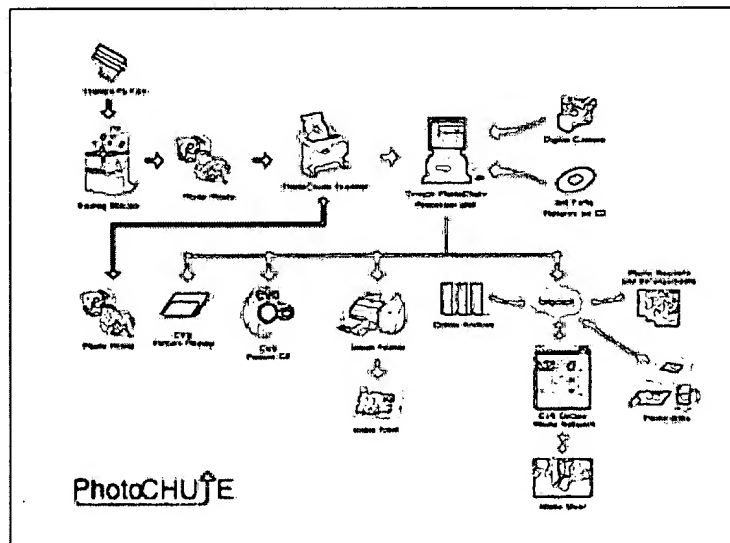
starts the scanning process. PhotoChute uses a batch feeding mechanism, which automatically loads and scans each print. The system, which accepts both photo prints and digital image files, comes complete with the necessary hardware, print scanner with batch-scanning auto-feeder, color inkjet printer and Telepix application software.

## Global presence

During the first six months of the year 2000, Telepix has systematically expanded into markets outside North America. The company teamed up with InfoMagic Systems Pte. Ltd. of Singapore to introduce online photo network services to Asian countries. Telepix also formed a joint venture with Hanset Pty Ltd. in Australia to

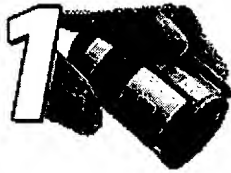


introduce and distribute the entire product line to photo retailers and photofinishers down-under. "The Internet is creating a real global community on planet Earth", says Karl Kenny, CEO of Telepix. "It is our mission as the leading developer of Internet imaging and e-commerce solutions to be the engine that makes pictures available over the net to people anywhere, any time."





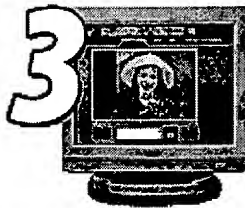
## Kodak PhotoNet online — The easy way to enjoy your photos



Simply drop off your film at any of 40,000 participating retailers. Ask for Kodak PhotoNet online at the counter and give your e-mail address to the clerk, or check the box on the film envelope and provide your e-mail address.



You'll get an e-mail when your pictures are ready online that contains all the information you need to view your photos. As always, your prints and negatives will be returned to you.



To view them, simply go to the Kodak PhotoNet online web site and follow the instructions in your e-mail. Your photos will be online 30 days from the date they were scanned, but you can always store them longer.

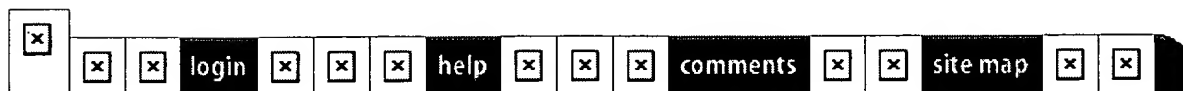


Digital Camera owners can also upload pictures to order high quality prints! Just create a free account and purchase a "roll" of spaces on the site. Then upload your photos.

**Demo!**

Ready to see the site in action?  
To view a demo, follow me! >

| [Create an Account](#) | [Find a Dealer](#) | [More Site Features](#) | [FAQs](#) |



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## main help menu

Please explore the Help section to learn more about Kodak PhotoNet online. You will find a much more detailed Help section once you login to your account. If you can't find answers to your questions contact customer service.

Click on a link below to view questions & answers on that topic:

- ☐ Creating your account
- ☐ Logging into your account
- ☐ Viewing photos
- ☐ Getting started
- ☐ Other Frequently Asked Questions

---

### ☐ CREATING YOUR ACCOUNT

- What is a Kodak PhotoNet online account?
- I tried creating my account, but it says the e-mail address is already in use. What do I do?
- How do I create an account?
- Does it cost anything to create an account?

#### What is a Kodak PhotoNet online account?

Your Kodak PhotoNet online account holds all the rolls you've had scanned to Kodak PhotoNet online, regardless of what photofinisher scanned them. In the past, if you had rolls scanned at different photofinishers, you may have had to go to different locations on the Internet to view them. Now, you can go to any Kodak PhotoNet online Web site to view your online rolls. You can login to any Kodak PhotoNet online site using your global account name and PhotoNet password and all of your rolls will be available for viewing.

#### I tried creating my account, but it says my e-mail address is already in use. What do I do?

You can only create one account on Kodak PhotoNet online per e-mail address. If the system says your e-mail address is already in use it is likely that you used it when creating an account on another Kodak PhotoNet online site. Kodak PhotoNet online accounts are global. The same Kodak PhotoNet account can be used on all PhotoNet web sites.

It's also possible that an account was created for you when another Kodak PhotoNet online member shared photos with you for the first time. You should have received e-mail with your account name and PhotoNet password. If you no longer have that e-mail and don't remember your password, simply use the auto password reset feature on the site and you'll be able to access your account in no time.

www.photonet.com (help)

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To do this, go to our home page and click on "forget your password?" just underneath where you enter your password. Enter your e-mail address and click on the "create new password" button and we will immediately e-mail you a new password.

If you never created an account with another Kodak PhotoNet online site and you're still having problems, contact customer service. They can help you with your account creation.

#### **How do I create an account?**

Creating an account is simple. Simply click on the link for "Create your Account" on the main page. After filling out some basic information your free account will be created.

Note: Some photofinishers will create an account for you when you give in your film if you provide your e-mail address. If this feature is available to you, you will receive e-mail from the photofinisher when your pictures are ready online. This e-mail will include your account information. If you already have an account and then you put another roll online the photofinisher will place your new roll in your account for you and send you notification by e-mail.

#### **Does it cost anything to create an account?**

No. Accounts are free.

[Return to top](#)

### **LOGGING INTO YOUR ACCOUNT**

- **I'm having problems logging into my account.**  
**Why can't I get in?**
- **I forgot my password. What do I do?**
- **Why is my Kodak PhotoNet password now the same as my AOL password?**
- **Why can't I change my password if I am an AOL user?**
- **AOL tells me never to give out my screen name and password at non-AOL sites. How is this different?**

#### **I'm having problems logging into my account. Why can't I get in?**

Check the spelling of your e-mail address and password. Passwords are case sensitive. Also, you may have forgotten or confused your password. If you aren't sure, click on "Forgot Your Password?" just underneath where you enter your password on the home page. You can then click on the "show reminder" button to see the word you chose to remind you of your password. Still can't remember? Click on the "create new password" button and we will immediately e-mail you a new password.

#### **I forgot my password. What do I do?**

If you aren't sure what your password is, or have forgotten it, click on "Forgot Your Password?" just underneath where you enter your password on the home page. You can then click on the "show reminder" button to see the word you chose to remind you of your password. Still can't remember? Click on the "create new password" button and we will immediately e-mail you a new password.

AOL members, you can now view your pictures through Kodak PhotoNet online by using your AOL e-mail address and password.

**Why is my Kodak PhotoNet password now the same as my AOL password?**

America Online and Kodak have partnered to bring you the easiest ways to receive and share your pictures online. AOL's new service, "You've Got Pictures," is powered by Kodak PhotoNet online, so now you can view your pictures at either site using your AOL e-mail address and password. For more information about "You've Got Pictures," please go to AOL Keyword: Pictures.

**Why can't I change my password if I am an AOL user?**

If you are an AOL member, your password information is stored only at AOL. To change your password, sign on to AOL, then go to AOL Keyword: Password.

**AOL tells me never to give out my screen name and password at non-AOL sites. How is this different?**

America Online and Kodak are both committed to consumer online protection. When you sign in to Kodak PhotoNet online, your screen name and password information are encrypted and sent to AOL for verification. Your password information is stored only at AOL. For more information, please go to AOL Keyword: Pictures.

[Return to top](#)

**VIEWING PHOTOS**

- **I have a claim card. How do I view my pictures online?**
- **What do the numbers on the claim card mean? What are Access Codes and Owner's Keys?**
- **Some pages on the site have the words "Roll ID" where "Access Code" used to be. What's the difference?**
- **I don't have a claim card, but I paid to have my photos online. Where are they?**

**I have a claim card. How do I view my pictures online?**

First you'll need to create an account by clicking on the "Create your Account" link on the homepage. After you login you will see any rolls you have in your account. Click on the link to "Pick up Rolls." You will then enter your roll's Access Code and Owners Key printed on your claim card.

Note: Some photofinishers actually put your rolls into your account for you so you don't need to use the information on the claim card. If this happened, you will receive e-mail from the photofinisher when your rolls are ready online. If you already had an account on Kodak PhotoNet online, simply login and your photos will be there. If you didn't have an account, your e-mail from the photofinisher will also have an account name and temporary PhotoNet password in it. Login using the information in your e-mail message. You will be asked to supply some information to complete your account. Once completed, your photos will be available for you to view.

### **What do the numbers on the claim card mean? What are Access Codes and Owner's Keys?**

Each time a roll of film is scanned at a photofinisher, unique numbers are assigned to that roll and printed on your claim card. The claim card contains an Access Code (sometimes called a Roll ID) that uniquely and securely identifies your roll. The Owner's Key identifies you as the owner of the roll, giving you permission to upload photos, delete photos and change captions in a roll

### **Some pages on the site have the words "Roll ID" where "Access Code" used to be. What's the difference?**

There's no difference. Thousands of rolls of film are put on Kodak PhotoNet online every day and need a unique identification name, or "roll identification." We used to call this identifier an "Access Code," but are changing the terminology to "Roll ID." Both terms mean the same thing, so no matter which term you use or see you will be able to view your photos the same as always.

### **I don't have a claim card, but I paid to have my photos online. Where are they?**

Some photofinishers actually put your pictures in your account for you so you don't need to use the information on the claim card. You should receive e-mail from the photofinisher when your rolls are ready to be viewed online. If you already had an account on Kodak PhotoNet online, simply login and your photos will be there. If you didn't have an account, your e-mail from the photofinisher will have an account name and temporary PhotoNet password in it. Login using the information in your e-mail message. You will be asked to fill out some required information to complete your account, and your photos will be available for you to view.

Note: It's also possible that the photofinisher did not put your pictures online as requested. Look in the film envelope. If you don't have a claim card (or an e-mail message from the photofinisher), and the service was requested and marked on the film envelope, it is likely your film may not have been scanned. To be sure, contact customer service. You may be asked to return your negatives to the photofinisher to be scanned free of charge.

[Return to top](#)

## **□ GETTING STARTED**

- **What is Kodak PhotoNet online?**
- **What are the features of this service?**
- **I use film. How do I get my pictures on Kodak PhotoNet online?**
- **I already have digital pictures from my digital camera/scanner/CD/disk. Can I use this service to get photo quality prints made?**

### **What is Kodak PhotoNet online?**

Kodak PhotoNet online is an online service that makes it easy to share your pictures and keep in touch whether you use traditional film or a digital

camera. Request the service when dropping off film for processing or upload pictures from your digital camera and you can:

- E-mail your photos
- Share pictures with friends and family online
- Order high quality reprints and picture gifts online without negatives

#### **What are the features of Kodak PhotoNet online?**

You can share your photos quickly and easily:

***E-mail photos*** quickly to one person or your friends and family. Enter in as many e-mail addresses as you like, select your photos, type a message, and click "send." They'll receive your photos as .jpg attachment files.

***Invite your friends and family*** to view your entire roll by sending them an e-mail message on Kodak PhotoNet online. This means your friends and family can order their own copy of whatever photos they like best — so you don't have to find the negatives! They have full access to all the features on the site, and **it doesn't cost them anything to view your photos!** Plus, they will access the system from their own account so they're using their own passwords and not yours.

***Order high quality reprints*** and make gift giving easy this year with a personalized photo gift. You can choose from mugs, mouse pads, t-shirts and even puzzles (depending on the products offered by your photofinisher.)

***Save pictures to your hard drive*** or a floppy for use in software packages and computer applications. Have a picture that you'd love to touch up? Want to make a collage or greeting card at home? Need a photo for a presentation or newsletter? It's all possible. You can use your best shots for monitor "wallpaper" or a screensaver! Just download the photos, and you're ready to go.

***Upload your photos*** from your digital camera, scanner, floppy or your hard drive. It's easy to upload retouched/enhanced photos for high-quality printing and easy sharing.

#### **I use film. How do I get my pictures on Kodak PhotoNet online?**

- Take your next roll of unprocessed 35mm or APS film to any retailer offering Kodak PhotoNet online. There are over 40,000 retailers and many mail order photofinishers in the US offering the service. For more information on where to find Kodak PhotoNet

online, see how it works.

- Ask for the service at the counter or check the box for Kodak PhotoNet online on the processing envelope.
- When you pick up your prints there will be a claim card in the envelope with instructions for viewing your pictures online. Create your free account on Kodak PhotoNet online, and follow the step by step instructions on the card. That's all there is to it.

*Note:* Some photofinishers put the roll in your account for you, and e-mail you when your pictures are ready online. If you already have a PhotoNet account simply login after you receive the e-mail and your pictures will be waiting for you. If you don't have an account, your e-mail from the photofinisher will have your account name and temporary password included. Login using this information.

**I already have digital pictures from my digital camera/scanner/CD/disk. Can I use this service to get photo quality prints made?**

Sure! To get started:

- 1) Create your free account on Kodak PhotoNet online
- 2) Purchase a "roll" of storage space on the site or add a few empty spaces to a roll currently in your account.
- 3) Upload your photos to the roll and order your reprints! Friends and family can order their own prints too once you share this roll with them.

[Return to top](#)

## FREQUENTLY ASKED QUESTIONS

- What is the resolution of the pictures?
- What kind of computer equipment do I need?
- What internet browser works with Kodak PhotoNet online?
- Are my pictures safe? I don't want anyone else to view them.
- Why would I want to put my pictures online or on my computer?
- Do I still get my prints back?
- How long does it take?
- Can I save them to my computer?
- What do digital reprints look like?
- Will the photos take up a lot of space on my hard drive?
- Will I be able to use my digital photos in other computer programs?
- How long will my pictures be available to me on the Web?

### **What is the resolution of the pictures?**

When you view your pictures online, they are displayed at screen resolution. Viewing pictures at screen resolution allows your system to load the pictures faster. Your film however, is scanned at high resolution (1024X1536 pixels). The high resolution images are used for high quality reprints and gift items.

**What kind of computer equipment do I need?**

The computer you are using now is probably sufficient but that's not the end of the story. While your computer speed may be just fine, you may experience delays in your uploads and downloads if you have a slow modem. Faster modem speeds mean your pictures load faster, so we recommend the highest speed modem available. For the best performance and security, we recommend you use the latest versions of either Netscape or Internet Explorer. You can download the most current release from <http://web.archive.org/web/20000229162936/http://home.netscape.com/computing/download/index.html> or <http://web.archive.org/web/20000229162936/http://www.microsoft.com/windows/ie/default.htm>. If you have questions about the browser you are using or if you are having problems viewing the site with your existing browser, please send your question using the "comments" link at the bottom of most pages.

**What internet browser works with Kodak PhotoNet online?**

For the best performance and security, we recommend you use the latest versions of either Netscape or Internet Explorer. You can download the most current release from <http://web.archive.org/web/20000229162936/http://home.netscape.com/computing/download/index.html> or <http://web.archive.org/web/20000229162936/http://www.microsoft.com/windows/ie/default.htm>.

**Are my pictures safe? I don't want anyone else to view them.**

Kodak PhotoNet online is an account based system. That means you select a username and a password to set up an account. Your pictures are stored in your account, so you control who can see them. When you share a roll with someone, they receive their own account, so they never need to know your password.

**Why would I want to put my pictures online or on my computer?**

Having pictures on your computer makes it easy to share across distances. You don't have to address envelopes and wait for pictures to go through the mail for people to see them. Plus you can share with a large group of people in one easy step. You also have the ability to order reprints online, so you don't have to find the negatives.

Once your pictures are in digital form, you can do a lot with them. You can make calendars or party invitations, put pictures in presentations, and use them in software packages to make collages and cards. Using software programs to enhance your pictures gives you even more options. You can crop and enlarge. You can even reduce red-eye. Then upload them to make an improved reprint.

**Do I still get my prints back?**

Yes. You will receive your prints and negatives back. In the envelope you will also find and claim card that has all the information so you can view your photos online. You may also get a message from your photofinisher informing you that your roll has been scanned and is waiting for you online.

**How long does it take?**

It depends on the store you choose. Some stores offer 1 hour service. For traditional "overnight" locations, the average turnaround time is 2 days for 35mm film and 7 days for APS. Mail order photofinishers traditionally process your film the same day they receive it and will send you a notification e-mail the same day your pictures are put online.

**Can I save them to my computer?**

Yes. You'll have a choice between low, medium and high resolution downloads.

**What do digital reprints look like?**

Great! Technology has come a long way and we can now offer reprints of incredible quality. Our prints are made on photographic paper with the same look and gloss you'd expect from your normal prints. The difference between a digital print and one made from a negative is unnoticeable at the 4x6 and 5x7 sizes, and only slightly noticeable at the 8x10 size.



*Note: The previous statement is true for reprints made from film scanned at our photofinishers. If you upload pictures from a digital camera or scanner, we cannot control the quality of reprints made from those files. Please see our Q&A's on uploading photos once inside your account for more information on recommended resolutions for high quality reprints.*

**Will the photos take up a lot of space on my hard drive?**

No. We store your pictures online unless you download them to your home computer.

**Will I be able to use my Kodak PhotoNet online digital pictures in other computer programs?**

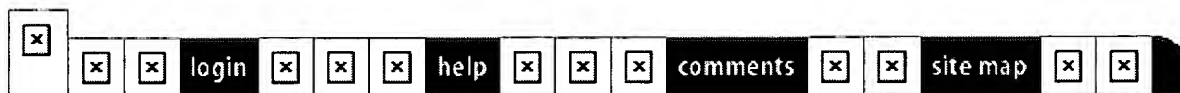
You can use the pictures as you would other digital pictures. You can save pictures to your desktop for use in word processing, presentations and other graphics software.

**How long will my pictures be available to me on the Web?**

Your pictures will be stored online at no additional charge for 30 days from the date they were scanned.

~~If you would like to extend the time you can do by buying more time. You will be notified by e-mail 5 days before your roll expires. If you elect not to extend the time that your pictures are available online they will be deleted.~~

[Return to top](#)



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## PHOTONET ARCHIVE URLS

1. [http://web.archive.org/web/20000229210155/pvind.photonet.com/1S\\_site\\_map.htm](http://web.archive.org/web/20000229210155/pvind.photonet.com/1S_site_map.htm)
2. [http://web.archive.org/web/20000302112950/pvind.photonet.com/how\\_works.htm](http://web.archive.org/web/20000302112950/pvind.photonet.com/how_works.htm)
3. [http://web.archive.org/web/20000229162936/pvind.photonet.com/1S\\_help\\_main.htm](http://web.archive.org/web/20000229162936/pvind.photonet.com/1S_help_main.htm)

PhotoNet  
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site map

Click on a picture below to see a demonstration of the activities available:



- ☐ **view & share roll**  
view your photos,  
share your roll  
with many people  
quickly and easily,  
and caption your  
photos
- ☐ **e-mail photos**  
share your photos
- ☐ **e-mail postcard**  
a fun way to share  
your favorite pic  
with a personal  
message



- ☐ **order reprints & enlargements**  
send a copy to  
Grandma
- ☐ **order photo gifts**  
search no more  
for that perfect gift
- ☐ **download photos** the  
possibilities are  
endless



- ☐ **fix & enhance**  
here is what you  
can do, just  
download your  
pictures -your only  
limit is your  
imagination
- ☐ **warp your photo**  
and send it on a  
postcard



- ☐ **pickup roll**  
got a roll ID? go  
here
- ☐ **remove roll**  
bored of the  
photos? delete  
the roll
- ☐ **extend time**  
before your roll  
expires, add more  
time
- ☐ **buy new roll**  
so you can upload  
a whole roll of  
digital pictures  
you already have
- ☐ **add spaces**  
buy additional  
spaces so you  
can upload just a  
few pictures
- ☐ **delete photos**  
get rid of  
unwanted or  
unflattering  
photos
- ☐ **rename roll**  
give your roll a  
title
- ☐ **upload photos**  
upload photos  
from your digital  
camera or PC to  
available spaces
- ☐ **download photos** the  
possibilities are  
endless



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## Contents - PNL 17.03

PMA Europe Opens to Several Announcements*	1
Brief News of the Photofinishing Industry (* indicates more in on-line edition)	5
Upcoming Conventions/Meetings	6
Business News	7
Stock Market Listings	8

### PMA Europe Opens to Several Announcements\*

At PMA Europe this year, the Sunday hours extended until 4:00 PM. While attendance was light on both Saturday and Sunday, and seemed to be down from previous years on Thursday and Friday (a trend being felt among many exhibitions this year), one exhibitor of lab systems stated that those that did come were buyers. Some exhibitors, primarily those with digital products and conventional minilab products and accessories, seemed to have sufficient visitors every day. And, exhibitors located at the back of the show, who have complained in the past about lack of visitors, expressed satisfaction with "traffic" - at least through the first three days of the show.

"Where's Kodak?" This frequently recurring comment was heard continuously throughout all four days of the PMA Europe '99 tradeshow. Kodak Professional did, actually, have some presence at the exhibit of Halse Systems, which produces software sold by Kodak Professional; Picture Vision Europe provided information about the PhotoNet system; and Noritsu had a mock Kodak Express store in its booth. Still, even Polaroid, which has reduced its presence in this show over the years, did have a 10x10 foot booth. With no speakers from Kodak participating in the five days of programs, the company lacked any forum to present any "position statements," and numerous attendees and exhibitors even raised questions about its commitment to a leadership position in the industry.

For those large-scale photofinishers attending the show, the announcement during the previous week that a Management Buy-Out of ColourCare International from the previous management (who had led a Management Buy-Out from London International Group five years ago) for £55 million [\$92 million] seemed to offer encouragement that the investment community (Gresham Trust, a private equity firm, and The Bank of Scotland were backers of the buyout) sees a future in this business.

On the other hand, Gretag Imaging, which moved into the "first" booth position formerly occupied by Kodak, and also had separate areas for its Professional Division, as well as its own conference area upstairs, staked its claim as the most prominent exhibitor in the show. During a meeting for press and analysts on Friday, October 15, Gretag Imaging announced that it is acquiring 80 percent of the shares in the Canadian-based company Telepix Imaging Inc. for US \$30 million to be paid in cash, shares and options (with the goodwill to be written off over 10 years).

Gretag Imaging Pres/CEO *Peter Fitzgerald* commented that the decision to acquire a majority interest in Telepix, with 30 employees and projected 1999 sales of US \$5 million, was made quite quickly during extended discussions about establishing a partnership relationship. Rather than a 100% ownership, Gretag Imaging chose 80% to provide an incentive for existing management to continue to build the business - with the key attraction of Telepix being its e-photo e-commerce expertise, which will be integrated into both Central Lab systems (with connections to retailers) and MasterFlex Digital minilabs, which will be available in January, although quantity shipments will not start until April, 2000.

Telepix already has established relationships for Internet-based photo services in Canada with London Drugs, Loblaws and Blacks - which together represent a significant share of the Canadian amateur photoprocessing market - Jostens, and Seattle FilmWorks' retail operations in the U.S. Northwest. Its Photo Network is fueled by Telepix software integrated in the minilab or portrait studio. The software can also connect to a Telepix PhotoStation. It recently entered a strategic alliance with IBM, with whom it is creating an integrated e-business platform for the photographic industry. Other strategic partners include Sony and Worldgate, an Internet TV company. When asked whether Gretag Imaging was mounting a direct competitive challenge to Kodak, Fitzgerald said his company is focusing on developing the Kodak/AOL connection at its on-site locations, did not expect to become a direct competitor of Kodak, and that Kodak still owns 4% of all Gretag Imaging shares outstanding.

Commenting on Gretag Imaging's strong financial position, Peter Fitzgerald said that the accumulated sales in the first three quarters of 1999 exceeded the total sales in 1998. *Bill Recker*, Gretag Imaging Group Chairman, reviewed the Professional Imaging Division. 1999 sales, representing about 15% of overall Group sales (Central Lab Equipment will contribute 25% and Point-Of-Sales 50%), are projected to reach \$91 million (Raster Graphics - \$ 50 million, Onyx Graphics - \$ 6 million, and Cymbolic Sciences - \$35 million). He stated that the company's target is to increase sales of this division to \$200 million - 10-15% of the growth being achieved through internal growth and the remainder through acquisitions.

Under the guidance of chairperson Chris Swain (Swain's International plc, UK), an Executive Visionary Panel - *Michael Gleich* (Ringfoto Zentrale, Germany); *Michael Likierman* (GrandVision, France); *Nick Richens* (London Camera Exchange Ltd. - UK); and *Rainer Schorcht* (Foto Schorcht GmbH, Germany) - presented a photo specialty dealer perspective to industry trends.

Each participant provided a brief overview of his company's activities. GrandVision, which began in 1981 as Fotofast SA, changed its name to Photo Service in 1984, and has acquired 12 stores from Photo Hall in 1986, and Minit Colors and FlashOne in 1994. In 1995 it established its first Photo Station outlet, and last year changed its name to GrandVision to reflect its diversification into the optics (eyeglasses) business. In the photoprocessing area (a combined 214 million Euro [\$198 million]), Photo Service, with 214 on-site processing stores (typical store requires a 600,000 Euro investment and yields annual sales of 800,000 Euros) has about a 10% share of the French market by value (8% by volume). The 202 Photo Stations, which are much smaller (typically 300,000 Euros investment and annual sales of 600,000 Euros), provide limited lower-priced off-site services, but also have about 8% market share by volume.

Ringfoto, a cooperative of German specialty photo dealers, currently has 1,533 members with 2,461 outlets (end of 1998 - 2416 outlets for 1476 members and overall sales of \$1 billion). Its members offer 4,000 products, together with photoprocessing services, to the public and hold a combined 25% market share. Foto Schorcht is a member of Ringfoto (Mr. Schorcht is on the board of management) and operates 30 shops (10 in the Gütersloh area in Western Germany and 20 in the Magdeburg area in Eastern Germany) with total sales of DM 20 million [\$11 million].

Established in the 1950's, London Camera Exchange is a cooperative of 23 photo specialty dealers in the South and Southwest of England (with none in London). Headquartered in Winchester, the annual group revenues are £18 million [\$30 million] and the average store size is 600 ft.<sup>2</sup>.

*How is APS being promoted?* During the Christmas season, Photo Service heavily promotes APS and actually sells a limited selection of cameras (otherwise it does not sell any cameras). In the French market, APS now represents about 40% of all camera sales and 10% of all film processing (up from 6% in 1998), although those Photo Service locations that have been processing APS film on-site from the beginning see about a 20% market share. Likierman feels that the promise of APS being a "bridge to digital" has never been fulfilled, and feels that its film market share is unlikely to grow above 20-25% in France.

Two-thirds of all new cameras sold by the London Camera Exchange are APS format, although acceptance of the format has been hindered by the high prices for processing. Richens commented that, while new customers and those seeking to replace compact cameras will purchase an APS camera, the avid photographer is more likely to purchase a digital camera.

"Either APS came five years too late, or digital cameras arrived five years too early," stated Gleich. Only one original APS camera (Canon Ixus) was unique, and processing was too expensive (his group now prices it the same as 35mm). The APS film market share is currently about 20-21%, and could grow as high as 35-40% - with 60% of all group camera sales now in the APS format.

*One-Time-Use Cameras (OTUCs)?* Richens said his dealers originally disliked these products, feeling that they would not get additional sales. However, they now recognize that customers buying OTUCs usually return for processing and represent good repeat business. OTUC sales are being promoted, and are growing at double-digit rates.

GrandVision began its private-label branding of films with OTUC units (About half of all OTUC sales in Europe occur in France), and found that they sold better than the manufacturer-brand units, even though the prices are comparable. From the audience, Bob Mackay said this was probably due to consumers feeling that the store selling its own brand and handling the processing is singularly responsible for the quality of the final prints.

For about \$25 a year, GrandVision can get a "Loyalty Card." Not a discount card, this entitles them to get a free film (their choice of any brand, speed, etc.) every time they bring in a roll for photofinishing (after 4-5 visits, the card has been paid for by the value of the film). 70% of the free film chosen is Kodak-branded, followed by the GrandVision private brand (priced higher than Agfa- and Konica- branded films, it follows only Kodak in brand popularity - about 70% of its private-label film is given away rather than being sold). By providing each loyalty club member with a SmartCard, GrandVision can track visits, sales, etc. of each customer, and store personnel can address each visitor by name. About 25% of all Photo Service customers have cards; visit an average of 10 times a year (compared to the industry average of 4-5 visits per year); and, as a group, represent about half of all sales.

On the other hand, German consumers are considered "green" and have not embraced these cameras. Ringfoto members would prefer to sell an inexpensive Dm 50-70 reusable camera than an OTUC. It does have its own private-label brands of film under the Avo and Voightländer names. Swain confirmed the strong environmental feelings of German consumers, saying he had sent 3-packs of film to Germany which were "overwrapped" on the original packaging. Sales were dismal, and the film was returned to the UK, unwrapped, and sold locally.

Gleich said that his members' customers are already loyal and would be offended if asked to pay for special attention. Most of the members shops are in small towns, where turnover of help is very low, and customers expect to be recognized and addressed by name. Schorcht added that his store personnel are expected to begin filling out the photofinishing order envelope with customers' names as the customers enter the shop.

*What about digital?* Ringfoto members initially viewed digital cameras as a "step to our death" and refused to get involved with digital cameras. Now, members are willing to learn about digital cameras, while recognizing that digital will replace conventional film in some cases. Gleich said that 180,000 digital cameras were sold in Germany in 1998 and the projection for 1999 is 300,000 units. Selling memory cards at DM 100 each is becoming a growing business.

"Germans are different," stated Gleich (a comment he used in reference to several topics), referring to use of images over the Internet. Digital camera users now give dealers their memory cards and expect to get prints. He feels that the digital prints should be priced comparable to his premium line of photofinishing - of DM 0.90 [\$0.50] per print.

Schorcht commented that dealers initially asked potential digital camera buyers whether they owned a PC; refusing to sell to those who did not. As the concept of digital become more understood, they accepted that they did not ask potential camera buyers whether they owned a home darkroom, and realized that digital camera buyers could similarly bring their images back to the shop for processing. Now his shops are putting in digital minilabs so that they can serve both customers.

Digital allows people to explore further uses of images at home, said Richens. In comparison, APS images, maintained on a film inside the cassette, are difficult to use at home. Many group customers buy digital cameras without having a PC, and often ask about whether the shop sells PCs. Member shops are now selling digital printers. "People talk about photos on the 'Net," said Richens, "but few actually are using images that way." A promotion in the UK providing a free Picture CD with every roll of APS processed has been quite successful in making customers aware of the service. He feels that these customers will come back for Picture CD services in the future.

GrandVision has 70 different test projects in its stores to test the viability of photos-on-CD and other digital services (which together represent less than 1% of revenues today). "What customers want is not technology, but simplicity. Making customers go through complex steps is not the way to expand the use of images," stated Likierman (and endorsed by all the panelists). Photo Service has professional/business customers already, but is trying to attract consumer digital camera users.

One audience member spoke about a recent study that indicated a typical conventional camera user will take 100 images and make 100 prints. In comparison, a typical digital camera user will take 800 images, but produce only 90 prints. So, the trend towards digital could reduce the number of prints produced, but not as dramatically as many think. Another quoted a study that showed people read text on a hardcopy 3 times faster than they are able to read text on a monitor screen.

E-commerce will replace mailorder, in the opinion of Likierman, and will become a factor in business-to-business transactions. But he is skeptical about it affecting his walk-in consumers. Gleich feels that Germans are suspicious about providing credit cards numbers over the Internet, and will not become big e-commerce supporters. However, all the panel members acknowledged that their perceptions of what the younger consumers want, and do, may be wrong. As Likierman asked: "Are we looking for reasons not to adopt new technologies and marketing strategies?"

Digital minilabs are already undergoing some interesting evolutions. The Fujifilm Frontier 350/370 series (the 370 can produce 1,450 4x6-inch prints/hr., and both handle color negative, color-transparency and B&W films in APS, 35mm and 120/220 formats) was officially introduced at the show with its Kiosk and Remote input stations. A working prototype of the former was shown during the PPLA in March (see PNL 16.25), and preproduction units of both systems were "quietly" demonstrated during the PMA Fall show in Miami Beach. Developed by Axiom in the UK, the Kiosk (which carried the "Fotokiosk" name at the show) is built around a touchscreen monitor connected to input and output devices. At PMA Europe, the two input devices were an Epsom flatbed scanner and a digital drive tower able to read floppy, PCMCIA cards, Smartmedia/CompactFlash cards, and CD-ROM media. The choice of drives is made by the retailer. Besides a Frontier 350, a Pictography 3000/4000 was hooked up as an output device (other output printers could be the Pictostat 400 and NC301-D). In addition, it will also be able to output to a remote digital minilab via ISDN or media transfer. A receipt printer itemizes the total order and provides a combined price - in the UK that includes VAT, and as the system is offered elsewhere it will undoubtedly also add the appropriate taxes - to the customer.

The touchscreen monitor allows a customer (or operator) to select the digital input source (automatically loading in the images), select the type, size and number of prints/print packages (including index prints) desired for each image, zoom and crop (by sliding a finger across the screen to define the print-image area). If the selected print size is too large for an acceptable print from the digital file size provided, the system will not permit the prints to be made (although this can be overridden, if the retailer wishes). Some features which are still being developed include templates which apply overlays to prints for calendars, etc., and a Preview & Select feature that reads a barcoded customer card and then automatically displays all the scanned images from recently processed films or digital files - allowing the customer to then select those images from which he/she wishes to make prints. A typical price for a system including an input tower and an A3 printer (297x420 mm) will be £9,000 [\$15,000]. Both Boots and Jessops are already testing these systems in the UK.



Fujifilm will produce tailored imaging programs aimed at specific market segments: Kiosk Retail - aimed at all retailers interested in offering digital print services including digital and PC retailers; Kiosk Lite - suitable for independent retailers with one store; KioskPRO - aimed at pro labs, both social and commercial; Kiosk Mainlab - aimed at wholesale and mail-order labs; and Kiosk Picture Sales - aimed at a range of businesses with large picture libraries, including newspapers, government departments and museums.

In fact, the cable-connected Remote Unit, a compact flat-screen input device running the same software, is expected to be tested in the Railway Museum in York. This will store up to 2,000 preselected images of trains which can be selected by the customer and prints ordered in various sizes to be printed by a central printer. Several units will be situated throughout the museum. The Remote Unit (about \$3,000) will also provide all the regular print ordering functions.

The company picked this show for the international launch of its Fujifilm Digital Image Service - FDi - which has already been working in the Japanese market for a while, and FujifilmNet Internet service for the UK market. In its release announcing these services, Fuji Photo Film (UK) stated that, according to GfK, digital cameras today represent 7% in units and 22% in value of the cameras being sold in the UK, and by 2001 Fujifilm expects at least 10% of the printing market will be generated electronically. FDi will include the different digital output systems already mentioned, plus output to CD.

For FujifilmNet, retailers scan the images at high resolution 4-Base, keeping those hi-res images on a local server while loading low-res 1-base images onto the Internet. This permits customers to use the images for Email, but return to the originator for prints - and they can upload their own images into their albums (which are tagged for maximum acceptable print size, depending upon file sizes. Customers can make their own albums, and create separate albums for "guests." A unique feature is that customers receive an Email confirming any orders placed from their albums, whether placed by them or by guests.

Noritsu introduced its new QSS-28 Series of digital minilabs, based on the Digital Micromirror Device digital print engine from Texas Instruments. These minilabs will accept inputs from a variety of digital media, and can also output to the same media. The printer-processors accept color negative, transparency or B&W films in 110, IX240, 135 and 120/220 formats and print onto paper widths from 3.25- to 6- inches. Processing capacity of the QSS-2801 model is 1,590 4R prints/hr., while the faster QSS-2802 produces 2,260 4R prints/hr. These minilabs are also available in QSS-2811/2812 DLS (Digital Lab System) versions incorporating Kodak software and easy connection to Kodak PhotoNet online.

Because of the requirement for special laser paper, Noritsu has currently elected not to offer any minilabs with laser engines, according to Hiroo Ikeura, executive managing director, Sales and Marketing. The company's philosophy is to offer minilabs that will work with any output media. The QSS-2701/2711 DLS series incorporates Noritsu's MLVA printer head with a print resolution of 400 dpi and a capacity of 1,200 4R prints/hr. However, this model can print on paper up to 12-inches wide, providing prints up to 12x18-inches. For those customers who have limited budgets, Noritsu offers its hybrid QSS-2611 model with a VFP digital print engine (216 dpi) and a capacity of 936 3R prints/hr. with a maximum print size of 8x12-inches.

#### **Brief News of the Photofinishing Industry (\* indicates more in on-line edition)**

- \* CPI Corp. ([www.cpicorp.com](http://www.cpicorp.com)) cancelled a special stockholder meeting on October 26, originally called to allow the stockholders to act on an Agreement and Plan of Merger, dated June 15, 1999 (the "Merger Agreement") by and among CPI and SPS International Holdings, Inc. and SPS Acquisition, Inc., entities affiliated with American Securities Capital Partners, L.P. ("ASCP"), which proposed to acquire the stock of CPI.

CPI has filed claims against ASCP and its affiliates, asserting that ASCP and such entities are in willful breach of their obligations under the June 15, 1999 Merger Agreement entered into among those companies and CPI. CPI asserts that ASCP willfully failed to use its reasonable best efforts to complete the trans

action, including by failing to complete the financing for the transaction and that it reneged on its obligation to use the bridge financing available to it.

*Alyn Essman*, Chm/CEO of CPI, stated, "ASCP's claim of a material adverse change in CPI's business is a transparent artifice to avoid its obligation to complete the Merger. We believe that ASCP had other reasons for refusing to perform, in particular, the substantial increase in the cost of funds in the high-yield debt market. CPI is in all material respects the company that ASCP contractually committed itself to purchase." CPI seeks damages of \$80 million, together with attorneys' fees and costs, from ASCP under its guarantee of SPS International's obligations.

- \* Hunt Corporation will consolidate its operations in Britain, the Netherlands and United States, taking pre-tax restructuring and other charges totaling \$9-12 million. It will consolidate its film adhesive coating operations in Britain and its converting operations in the Netherlands. In the U.S., Hunt will move several operations from Connecticut, including film converting, to North Carolina; large machine assembly to Wisconsin; and small machine assembly to North Carolina. It will outsource its European distribution and consolidate its U.S. distribution to improve customer service; and reduce capital investment and operating costs. Jobs will be eliminated and fixed costs reduced in Europe and the U.S.

***Upcoming Conventions/Meetings (a complete listing is at our Website <http://www.photo-news.com>)***

<b>Nov. 15-19</b> 1-781-433-1665	<b>ZD Events</b> Fax: 1-781-449-2674	<b>COMDEX Fall '99</b> <a href="http://www.comdex.com">www.comdex.com</a>	<b>Las Vegas Convention Center</b> <b>Las Vegas, NV</b>
<b>Nov. 16-19</b> 1-703-642-9090	<b>IS&amp;T/SID</b> Fax: 1-703-642-9094	<b>The 7th Color Imaging Conference</b>	<b>The SunBurst Resort</b> <b>Scottsdale, AZ</b>
<b>Nov. 23-26</b> +971-4-319-444	<b>Dubai Rai</b> Fax: +971-3-362-988	<b>Photo Vision '99</b>	<b>Dubai World Trade Center</b> <b>Abu Dubai, UAE</b>
<b>Jan 7-9</b> 1-404-522-8600	<b>PPA</b> Fax: 1-404-614-6405	<b>Digital Power Imaging Conference</b> <a href="http://www.ppa-world.org">www.ppa-world.org</a>	<b>Riviera Hotel</b> <b>Las Vegas, NV</b>
<b>Jan 10-13</b> 1-404-522-8600	<b>PPA</b> Fax: 1-404-614-6405	<b>Power Tools - The Studio Success</b> Conference ( <a href="http://www.ppa-world.org">www.ppa-world.org</a> )	<b>Riviera Hotel</b> <b>Las Vegas, NV</b>
<b>Jan. 22-28</b> 1-360-676-3290	<b>SPIE</b> Fax: 1-360-647-1445	<b>Electronic Imaging 2000</b> <a href="http://www.spie.org/info/pw/">www.spie.org/info/pw/</a>	<b>San Jose Convention Center</b> <b>San Jose, CA</b>
<b>Jan. 31-Feb 1</b> 1-703-642-9090	<b>IS&amp;T</b> Fax: 1-703-642-9094	<b>11th International Symposium</b> <b>on Photofinishing Technology</b>	<b>Rio Hotel and Casino</b> <b>Las Vegas, NV</b>
<b>Jan. 31-Feb 2</b> 1-517-788-8100	<b>PSPA</b> Fax: 1-517-788-8371	<b>Convention</b>	<b>Las Vegas Convention Center</b> <b>Las Vegas, NV</b>
<b>F b. 2-3</b> 1-517-788-8100	<b>PSPA</b> Fax: 1-517-788-8371	<b>Convention</b>	<b>Las Vegas Convention Center</b> <b>Las Vegas, NV</b>
<b>F b. 3-6</b> 1-517-788-8100	<b>PMA</b> Fax: 1-517-788-8371	<b>PMA 2000</b>	<b>Las Vegas Convention Center</b> <b>Las Vegas, NV</b>
<b>F b. 4-6</b> 1-305-558-4855	<b>PAF</b> Fax: 1-305-823-8965	<b>Graphics of the Americas 2000</b> <a href="http://pafgraf.org">http://pafgraf.org</a>	<b>Miami Beach Convention Center</b> <b>Miami Beach, FL</b>
<b>F b. 7-11</b> 1-781-433-1665	<b>Ziff-Davis/Softbank</b> <a href="http://www.seyboldseminars.com">www.seyboldseminars.com</a>	<b>Seybold Boston 2000</b>	<b>Hynes Convention Center</b> <b>Boston, MA</b>
<b>Feb. 20-22</b> +44-1799-544200	<b>Market Link</b> Fax: +44-1799-544205	<b>Link2000</b>	<b>Business Design Centre</b> <b>London, Great Britain</b>
<b>F b. 21- 23</b> 1-703-318-0300	<b>BillExpo</b> Fax: 1-703-318-7568	<b>Presentations 2000</b> <a href="http://www.presentations.com">www.presentations.com</a>	<b>Georgia World Congress Center</b> <b>Atlanta, GA</b>
<b>Feb. 24 - Mar. 1</b> 1-609-987-1202	<b>Hannover Fairs</b> Fax: 1-609-987-0092	<b>CeBIT 2000</b> <a href="http://www.hfusa.com">www.hfusa.com</a>	<b>Hannover Fairgrounds</b> <b>Hannover, Germany</b>
<b>F b. 28 - Mar. 2</b> +44-181-681-2619	<b>Mary Walker Exhibition</b> Fax: +44-181-667-1590	<b>Focus on Imaging</b>	<b>National Exhibition Centre</b> <b>Birmingham, Great Britain</b>
<b>F b. 29 - Mar. 2</b> 1-800-331-5706	<b>Advanstar</b> Fax: 1-218-723-9122	<b>ON DEMAND 2000</b> <a href="http://www.ondemandexpo.com">www.ondemandexpo.com</a>	<b>Jacob Javits Convention Center</b> <b>New York, NY</b>
<b>Mar. 3 - Apr. 3</b> 1-713-223-5522	<b>FotoFest Int'l</b> Fax: 1-713-223-4411	<b>FotoFest 2000</b> ( <a href="http://www.fotofest.org">www.fotofest.org</a> )	<b>Historic Districts</b> <b>Houston, TX</b>
<b>Mar. 8-12</b> 1-703-385-1339	<b>DPI</b> Fax: 1-703-359-1336	<b>DPI 2000</b> <a href="http://www.dpia.org">www.dpia.org</a>	<b>Wyndham Anatol</b> <b>Dallas, TX</b>

**Polaroid Corp. (NYSE) Cambridge, MA\* ([www.polaroid.com](http://www.polaroid.com)) ...**

... announced 3rd quarter (Sep. 27, 1999) revenues of \$463.0 million (1998 - \$448.8 million), with a profit from operations of \$11.8 million (1998 - \$41.6 million), and a net loss of \$3.8 million (1998 - income of \$29.8 million), or -\$0.09/share (1998 - +\$0.68/share). The three-percent increase in revenue was due primarily to increased sales of the new Pocket Camera and JoyCam. Worldwide instant camera unit shipments were up 126 percent compared with the third quarter of 1998. In addition, worldwide instant film shipments were up in the low single digits, compared with the same period last year. The 1999 third quarter results include a \$40 million pre-tax charge for the graphics business, largely made up of asset adjustments and severance payments. Of this amount, \$25 million is included in cost of sales and \$15 million is in overhead expenses. Gains in operating profit reflect savings from restructuring and sales of new products, offset somewhat by increased new product start-up costs and launch expenses.

The Americas region sales for the third quarter were \$285 million, compared with \$295 million in the third quarter of 1998. In the United States, sales were \$248 million compared with \$259 million a year ago reported on a segment basis. The reductions were in sales of videotapes, 35mm cameras and 35mm film, as well as in sales from non-core businesses.

European region sales in the third quarter of 1999 were \$93 million, compared with \$91 million in 1998's third quarter. 1998 European sales were negatively affected by the reduction of business in Russia. Excluding this Russian impact, the year-on-year comparison reflects the negative impact of foreign currency and low single-digit decreases in sales of instant film in the third quarter of 1999. The JoyCam and the I-Zone Pocket Camera have been launched in Europe, but new products are early in their distribution phase, so the sales impact is not yet significant in the region.

In the Asia Pacific region, sales for the quarter were \$85 million, compared with \$63 million in the same period last year. The 36 percent increase reflects continued success with new product sales in Japan, favorable impact from exchange and improved sales in the rest of the region.

For nine months, revenues of \$1,328.8 million (1998 - \$1,304.1 million) produced a profit from operations of \$45.8 million (1998 - \$33.4 million), and a net loss of \$19.8 million (1998 - income of \$24.5 million), or -\$0.45/share (1998 - +\$0.55/share). Excluding the \$40 million charge related to graphics, operating profit for the first nine months of 1999 would be \$86 million compared with \$33 million for the same period in 1998.

"We're making clear progress with our new products strategy," said *Gary T. DiCamillo*, Chm/CEO. "I'm pleased with our second consecutive quarter-vs.-quarter revenue gain and the significantly improved operating profit, excluding the graphics charge. The growing popularity of our new Polaroid I-Zone Instant Pocket Camera and the JoyCam as well as other new products is encouraging. Particularly notable is the increase in camera unit sales, with triple-digit increases in both our instant and digital camera lines. Additionally, we continue to improve the balance sheet, especially in the area of working capital."

**Spector Photo Group (Brussels) Wetteren, Belgium\* ([www.spectorphotogroup.com](http://www.spectorphotogroup.com)) ...**

... announced that a recovery of its German Photo Porst unit helped its operational profit in the first eight months of 1999 to rise to 19.9 million Euros (1998 - 5.8 million Euros). Spector's results in 1998 were affected heavily by losses at Photo Porst. Operational cash flow in the first eight months of the year was 47.9 million Euros (1998 - 33.9 million Euros).

Spector said in a statement that the provisional sales figures from Photo Porst for September are in line with its expected recovery and "management maintains its target of operational break-even in 1999 for Photo Porst." Overall, Spector said it expects the group's 1999 result to better that in 1998, increasing its full year cash flow by 9% or 10% compared with 1998.

...continued on page 8

## Business News (...continued from page 7)

### GrandVision (Paris) Paris, France\* ...

... reported 3rd quarter (Sep. 30) revenues of 205 million Euros (+17%) and nine month revenues of 566 million Euros (+14%). In the UK and Ireland, 3rd quarter sales grew by 39% while comparable store growth was 23%. Over 9 months, comparable store growth was 15%. In France, 3rd quarter sales grew 8% with 4% for comparable stores (Photo 3%, Optics 5%). Over 9 months, growth was 10% and 5% for comparable stores (Optics 7%, Photo 3%).

### Stock Market Listings

U.S.A. (values in \$)	Symbol	Exchange		Oct. 7 1999	Sep. 23 1999	June 17, 1999
AFP IMAGING	AFPC	(NASDAQ)	www.afpimaging.com	11/32	1/4	21/64
CONCORD CAMERA	LENS	(NASDAQ)	www.concordcam.com	9	8-11/16	5-1/8
CPAC	CPAK	(NASDAQ)	www.cpacimaging.com	5-5/8	7-3/16	8
CPI	CPY	(NYSE)	www.cpicorp.com	28-1/8	33-3/16	34-9/16
EASTMAN KODAK	EK	(NYSE)	www.kodak.com	75-7/16	73-13/16	70-11/16
ENCAD	ENCD	(NASDAQ)	www.encad.com	6-5/16	5-5/8	7
FUJI PHOTO	FUJIY	(ADR)	www.fujifilm.com	34-1/16	34-7/8	37-3/4
HEWLETT-PACKARD	HWP	(NYSE)	www.hp.com	87-3/4	94-5/8	89-5/16
HUNT CORP.	HUN	(NYSE)	www.huntmfg.com	8-3/16	8-3/16	10-7/8
IMATION	IMN	(NYSE)	www.imation.com	30-3/16	29-1/16	26
INDIGO N.V.	INDGF	(NASDAQ)	www.indigonet.com	2-7/8	3-1/4	3-11/16
INTERNATIONAL PAPER	IP	(NYSE)	www.ip.com	46-1/4	48	53-5/16
JOSTENS	JOS	(NYSE)	www.jostens.com	20	19-13/16	21-1/16
MAIL-WELL	MWL	(NYSE)	www.mail-well.com	13-5/16	12-15/16	15-1/4
3M	MMM	(NYSE)	www.mmm.com	95-1/4	95-1/4	90-5/8
MOTO PHOTO	MOTO	(NASDAQ)	www.motophoto.com	1-5/16	1-5/8	1-3/32
NEWELL RUBBERMAID	NWL	(NYSE)	www.newellco.com	28-1/16	28-1/8	44-3/16
NUR MACROPRINTERS	NURM	(NASDAQ)	www.nur.com	7-3/4	8-5/8	6
PHOTO CONTROL	PHOC	(NASDAQ)	www.photo-control.com	2-3/8	2-11/16	2-1/8
POLAROID	PRD	(NYSE)	www.polaroid.com	27-1/4	27-1/16	22-15/16
SAFETY-KLEEN CORP.	SK	(NYSE)	www.safety-kleen.com	11-1/4	12-3/4	17-15/16
SCITEX CORP.	SCIXF	(NASDAQ)	www.scitex.com	11-1/8	11-1/8	9-3/4
SEATTLE FILM WORKS	FOTO	(NASDAQ)	www.filmworks.com	3-9/16	3-3/4	3-3/32
VIRTUALFUND.COM	VFND	(NASDAQ)	www.virtualfund.com	1-7/8	1-7/8	1-5/8
X-RITE	XRIT	(NASDAQ)	www.x-rite.com	6-3/4	6-5/8	6-5/8

### Other Markets (values in currency indicated)

AGFA-GEVAERT	AGF BB	Brussels (Euro)	www.agfa.com	18.05	19.05	21.30
AGFA-GEVAERT	AGF GR	Frankfurt (Euro)	www.agfa.com	17.80	19.00	21.35
BAYER AG	BAY	Frankfurt (Euro)	www.bayer.de	37.63	36.60	40.72
BOOTS	BOOT	London (p)	www.boots.co.uk	653.50	670.00	761.00
CANON INC.	7751	Tokyo (¥)	www.canon.co.jp	3250	2885	3450
CEWE COLOR (1:10 split)	CWC	Bremen (Euro)	www.cewecolor.de	20.90	20.20	206.00
CHINA HK PHOTO PROD	1123	Hong Kong (HK\$)		1.03	0.94	1.25
COPAL CO.	7756	Tokyo (¥)		1685	1160	951
FOTOLABO S.A.	FOTO	Zürich (SFr)	www.fotolabo.com	N/A	470.0	475.0
FUJI PHOTO FILM LTD.	4901	Tokyo (¥)	www.fujifilm.jp	3600	3540	4440
GLUNZ & JENSEN A/S	GLUN DC	Copenhagen (DKK)	www.glunz-jensen.dk	N/A	143.0	100.0
GRANDVISION	GPS	Paris (Euro)		27.00	24.45	26.00
GRETAG IMAGING AG	GIGN	Zürich (SFr.)	www.gretagimaging.com	170.00	167.75	149.50
GRETAGMACBETH HOLDING	GREN	Zürich (SFr.)	www.gretagmacbeth.com	408.50	402.0	465
JINDAL PHOTO	JDPH	Bombay (R)		69.30	69.30	24.00
JUSPHOTO	4646	Tokyo (¥)		1800	1760	1710
KONICA CORP.	4902	Tokyo (¥)	www.Konica.co.jp	396	400	497
MITSUBISHI PAPER MILLS	3864	Tokyo (¥)	www2.infoweb.or.jp/mpm	207	195	225
MODERN PHOTO	MDRN	Jakarta (R)		1850	1375	2250
NEW INDIA INDUSTRIES	NII	Bombay (R)		N/A	N/A	136.5
NEW OJI PAPER	3861	Tokyo (¥)		812	725	711
NIHON JUMBO	9677	Tokyo (¥)		1250	1250	911
NORITSU KOKI	7744	Osaka (¥)	www.noritsu.com	5100	4880	3990
PHOTO HALL	PHO BB	Brussels (Euro)		32.00	32.00	33.50
PHOTO-ME INT'L	PHTM	London (p)		1392.50	1190.00	725
PHOTOBITION	PHB LN	London (p)		226.50	235.00	N/A
PLAZA CREATE	7502	Tokyo (¥)		8500	5760	4700
SAMSUNG AEROSPACE	1245	Seoul (W)		12200	13700	10000
SPECTOR PHOTO GP	PMIBT	Brussels (Euro)	www.spectorphotogroup.com	35.00	32.21	31.25

Compiled by J. Rosenzweig/Mark Kalinowski/Stephanie Crane at Salomon Smith Barney 212/816-3284 Fax: 800/353-8724

•\* (June 21, 1999 - PR Newswire) **New Online Service Develops High-Quality Photos from Digital Cameras with Ease**

**EZ Prints Delivers Fast, Inexpensive Photo Finishing to Digital Camera Owners**

(August 10, 1999 - PR Newswire) **CPAC Reports First Quarter Year 2000 Results; Company Declares Dividend**

(May 4, 1999 - PC Magazine) **New Epson, Eastman Kodak, and Toshiba digital cameras deliver performance—for \$600 to \$800** by Marge and Bruce Brown

(May 4, 1999 - PC Magazine) **Pro Scanning** by Daniel Grotta and Sally Wiener Grotta

(May 1, 1999 - Windows Magazine) **Clever Scanner Saves You Time** by Serdar Yegulalp

News May 3

**SIENNA IMAGING ACQUIRES DICOMED DIGITAL CAMERA TECHNOLOGY**

Company will integrate development team to produce new digital camera line

News - June 11

Bondsville MA- Source Two, Inc. announces the availability of 3 High Speed Paper Rewinders at cost. This 1/4 horsepower version rewinds approximately 1,800 feet of 3.5" paper in under 3 minutes. Unit handles 3.5", 4" and 5" paper widths, and offers external speed control knob and emergency stop feature. Comes equipped with standalone base with built-in bin for holding paper cores. Accommodates reels or cores on either side. Please contact Michael Shields, Jr at (413) 289-1251, ext 19, or splicers@aol.com for more information.

### **Extras**

\* **Fujifilm to Advance into Instant Photo Mart Overseas**

Fuji Photo Film Co. will make the first inroads into instant camera markets overseas, with the European debut this month of a newly developed camera for business use, which is to be followed by successive launch

**(InfoTrends) InfoTrends Research Group Presents ImageScape™ '99 — “Imaging and the Internet”**

**(October 6, 1999 - Business Wire) PhotoHighway.com Welcomes 10 New Sponsors**

**(October 5, 1999 - Business Wire) Sharing Digital Photographs Online has Never Been Easier; encoding.com Launches Online Application That Enables Consumers to Create and Share Streaming Slideshows**

**(October 5, 1999 - Business Wire) PhotoLoft.com and FreeColorPrinters.com Give Consumers “Free” Reign in Printing**

**(October 11, 1999) It's Quiet But Official: Kodak Will Keep Eastman Software**

**(October 20, 1999 - Business Wire) Ricoh Unveils the Aficio 850, The World's First “New Generation” High Volume Digital Imaging System**

**(October 20, 1999 - Business Wire) Digital Media Online Launches New Product Finder**

**(October 19, 1999 - Business Wire) Digital Imaging Conference in Tokyo to Address New Market Opportunities**

**Donnews July 27**

**(August 1, 1999 - Windows Magazine) Epson's Expression Makes High-Res Impressions by Serdar Yegulalp**

**(August 1999 - Computer Shopper) HP DeskJet 812C: Photo Quality Priced Less**

**(August 1999 - Computer Shopper) Nikon Coolpix 950: the coolest pix to date**

**(August 1999 - Computer Shopper) Ricoh RDC-5000: point and shoot in style**

(August 31, 1999 - PR Newswire) **Windows 2000 Achieves Scalable Color Solution for All Users  
Microsoft Continues Color Innovation With 64-Bit Color Space Proposal And Color-Quality Specifications**

(August 31, 1999 - Business Wire) **Monaco Systems Furthers Easy-to-Use Color Management with**

Business News - 08/16a

Polaroid Corporation (NYSE:PRD) Cambridge, MA ([www.polaroid.com](http://www.polaroid.com)) ...

Rimage Corporation (Nasdaq:RIMG) Minneapolis, MN ([www.rimage.com](http://www.rimage.com))...

(August 4, 1999 - Reuters) **China's Lucky Film H1 '99 net surges**

(August 3, 1999 - BizTech) **Tomy to Introduce US\$60 Digital Camera**

(August 3, 1999 - Nikkei) **Kodak Japan To Unveil Smaller Digital Camera In September**

(August 1, 1999 - Windows Magazine) **Epson's Expression Makes High-Res Impressions** by Serdar Yegulalp

(August 1999 - Computer Shopper) **HP DeskJet 812C: Photo Quality Priced Less**

(August 1999 - Computer Shopper) **Nikon Coolpix 950: the coolest pix to date**

Hicks - Release 08/05

(August 1999 - STORES) **The Definitive Ranking of the Nation's Biggest Specialty Chains: American Express Top 100 Specialty Stores** by David P. Schulz

(September 1, 1999 - PC Magazine) **New CD Writes Twice**

(September 1, 1999 - PC Magazine) **HP ScanJet 4200C, ScanJet 5200C, OfficeJet R40**

(June 8, 1999 - PC Magazine) **Film Is Dead, Part II**

News - 08/25

News - 08/16 From: Kathryn A. Rauschenberg

TO US MEDIA:

Kodak Maker by Lexmark below. Feel free to contact me if you have questions.

Date: Tue, 14 Sep 1999 09:34:52 -0700

From: "Mary Klekotka" <[maryk@owenmedia.com](mailto:maryk@owenmedia.com)>

PMA 1999

Agfacolor Professional Laser Paper

(July 12, 1999 - Business Wire) **Scitex's Advanced Printing Products Division to be Formed Into a Separate Company Which Will Raise Up to \$33.5 Million From Investors**

(July 12, 1999 - Business Wire) **Quebecor Printing and World Color to Merge**

(July 12, 1999 - Saint Paul Pioneer Press) **Data Storage Competition Intensifies as New Disk Technologies Emerge**

(July 12, 1999 - Business Wire) **New Products, Systems Incorporating IEEE 1394 Rising Rapidly**

(April 27, 1999 - Kodak) **Kodak Spotlights Key Growth Engines**

Kodak Picture Processing, Picture CD, Portrait & Social Digitization And Dry View Laser Imagers Among Key Growth Initiatives Poised For Success

NEW YORK CITY, — In a meeting here with investors, the presidents of Eastman Kodak Company's leading businesses today gave a glimpse into the company's robust portfolio of new products and programs, initiatives that reaffirm Kodak's leadership across consumer, digital, professional, and medical imaging markets.



# Onsite and online Pixel Magic Imaging

## The photo retailer's formula to digital imaging success

by John Larish

Pixel Magic Imaging (PMI) was started less than a decade ago as a part of Environmental Projections Systems, a company well known at that time for its front projections systems. Today, PMI is a highly recognized digital imaging software and Internet technology leader and pioneer in the fast changing online imaging and digital photography marketplace.

PMI also offers two digital imaging kiosks that allow consumers to instantly enhance and reprint their images: Photo Ditto and Digital Print Station. These products, along with other imaging systems such as the Backlab Film Scanning System, are designed as part of a suite of technology solutions marrying online image processing and fulfillment with photo retailers nationwide.

PMI's Internet portal for digital photography and online image processing is MyPhotoLab.com, a retail branded web initiative designed to support photo retailers with their need for online photofinishing infrastructure, service and support.

The company has taken a unique approach in entering the online photofinishing and Internet imaging marketplace combining its successful line of digital imaging kiosks and related technologies and has developed connectivity solutions allowing photo labs and retailers to use PMI's digital imaging systems as "on-ramps" to the Internet. The result? A powerful strategy designed to allow traditional photo retailers to

compete online while simultaneously leveraging their brick-and-mortar businesses.

### The PMI Imaging System Line-Up

PMI is best known in the industry for its successful line of digital imaging systems, the most popular being the Photo Ditto Copy & Enhancement System.

The Photo Ditto system features an open architecture design, innovative consumer interactive software (with audio instructions guiding the consumer through the

process), and Internet compatibility.

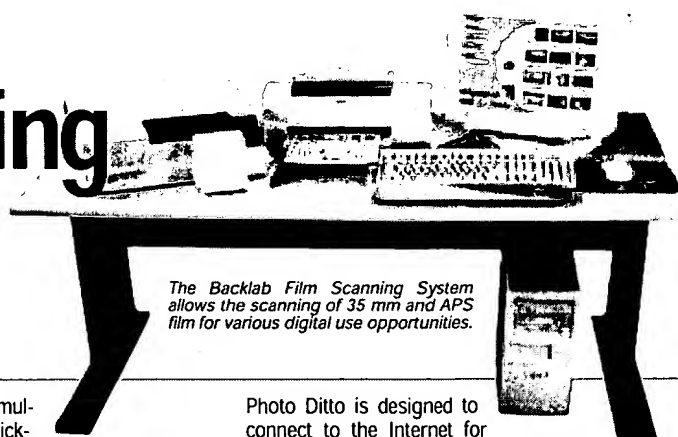
The system can be found in quality retail photo labs and drug stores across the U.S. such as Eckerd Drug and Meijer.

The Photo Ditto system creates photographic quality en-



David Oles, CEO and Chief Technical Officer of Pixel Magic Imaging

largements and packages while also offering a plethora of other services from film, print, CD or digital cameras. Services include photo calendars, specialty announcements (wedding, birthday, etc.) and business cards. Like all PMI imaging systems, the



The Backlab Film Scanning System allows the scanning of 35 mm and APS film for various digital use opportunities.

Photo Ditto is designed to connect to the Internet for online photo services such as uploading and emailing images through the use of MyPhotoLab.com, PMI's retail branded Internet website.

The Backlab system is used by photo retailers to scan rolls of 35 mm or APS (Advanced Photo System) film in only three minutes for the purpose of uploading images to the Internet as well as placing film images onto floppy disk or CD. Backlab can also print an index print directly onto the floppy or CD label for easy identification and retrieval for the photo consumer. The system is designed to allow photo labs to convert every camera into a digital camera by introducing the traditional film customer to the excitement, flexibility, and fun of digital photography. The Backlab system is one that allows retailers to add digital imaging services to the product mix while keeping the initial investment and required labor to a minimum. Like the Photo Ditto, images can be simultaneously uploaded to the retailer's co-branded MyPhotoLab.com website for ordering reprints or specialty items.

The Digital Print Station (DPS) is a new generation of photo kiosk designed specifically to serve the digital camera customer. Designed to create prints and specialty items from virtually any form of digital camera media or removable media (Zip disks, CDs, floppy, etc.), the DPS also connects to MyPhotoLab.com. The DPS is designed to be either an employee-assist or self-service kiosk (through the use of a credit card scanner and receipt printer) and gives digital camera owners new and exciting ways to share and repurpose their digital camera images.

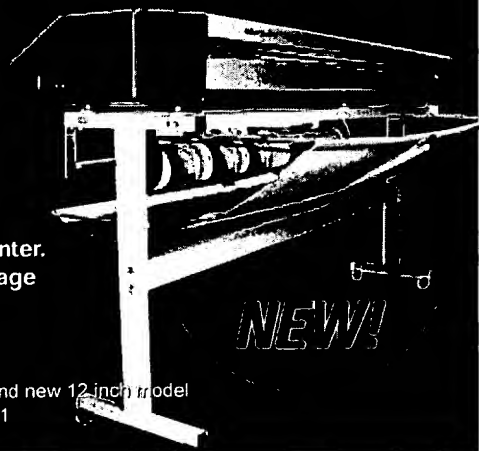


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The only automatic system that cuts sheets or rolls of multiple digital prints produced with any digital printer. (More info?... visit our web page at <http://www.fotoba.com>)



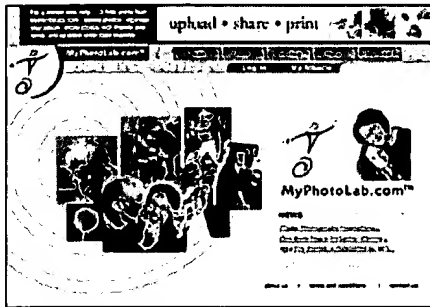
NEW!

## ROLLCUT WR55/61/75SL

A line of wide format X/Y cutter for all types of media up to 0.5 mm thickness. To finish your prints of a roll in all 4 ways at the same time.



See the new Digitrim 62 and the brand new 12 inch model at photokina: hall 10.1, booth no. A31



The My PhotoLab.com opening screen and logo

from digital camera images, the DPS also includes a user-friendly software application that allows for image enhancement, organization, and re-ordering from home. Images are simultaneously uploaded to MyPhotoLab.com for sharing and ordering of specialty photo gift orders. Once all orders have been completed, the consumer simply pays at the counter or through the credit card scanner in the DPS.

#### MyPhotoLab.com

Photo retailers have been searching for a way to leverage their existing brick and mortar business when competing in the new online photo processing and imaging marketplace. MyPhotoLab.com (MPL) was designed as a solution for photo labs that need an entire web infrastructure solution. MyPhotoLab.com offers privately branded retail sites for any photo retail business needing a way of selling imaging products and services over the Internet. It offers a comprehensive solution, and you don't need a Pixel Magic Imaging system to become an MPL retail partner. Pixel Magic offers a variety of retail branded solutions for businesses that have no imaging equipment as well as those that have already invested in some digital imaging solution.

Pixel Magic Imaging views the Internet and the photo retailer as two equally important segments of a successful digital imaging business strategy. Pure online photofinishing websites often leave the consumer with unanswered questions about digital photography as well as general customer service.

Pictures are personal, and while consumers love the Internet as an easy medium to use for distributing and sharing photos, actually ordering additional services and becoming a loyal customer requires a personal touch and a trusted brand name. The brand name can be a local retailer who has served the community for years or a superstore with a nationwide presence, but consumers often prefer to talk with someone before handing over their precious memories to be uploaded into cyberspace.

Another hazard of providing photo finishing and imaging exclusively over the Internet is the consumer's frustration tolerance. If the site is the least bit confusing or difficult, the "photo.com" company will lose both the consumer's attention and the business he brings with him. Getting a consumer to visit a site is one thing; getting him to purchase products and return for additional services is something entirely different, and retailers know they need revenues, not site visits, to continue growing their businesses.

Pixel Magic has also created another business, First Impressions provides photography services for hospital new-born infants. Photos are made digitally, proofs are made right at the hospital as are finished prints for the new mothers. Each night, the digital files are sent to PMI for storage and order fulfillment for additional orders for parents, relatives and friends. Already, that business has grown to over 100,000 babies each year in the United States.

The company is located twenty miles south of Austin in San Marcos, Texas and has a history of providing innovative solutions for photo retailers and has always demonstrated its belief that the physical photo store is a pivotal part of the future of photography – digital or traditional. Pixel Magic can be reached on the Internet at [www.primaging.com](http://www.primaging.com).



The digital print station is designed specifically for the digital camera user.

Consumers simply walk up to the Digital Print Station and, with the use of the touchscreen and online tutorial (using visual and audio prompts), can easily import digital camera images, enhance the images, and then order prints or an image CD. Photographic prints and CDs are generated immediately, with the completed order taking only a few minutes.

When creating an image CD



Creates photo quality enlargements and packages from film, prints or digital media

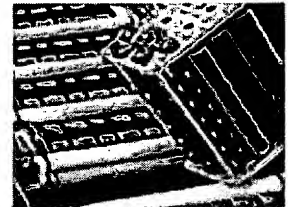
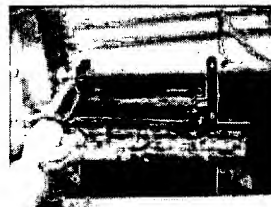


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## IQnews

# Excite's Photo Center Could Boost Web Visits

**BY SUSAN KUCHINSKAS**—Excite@Home has just launched a new consumer site called Excite Photo Center—which goes live today at [photocenter.excite.com](http://photocenter.excite.com)—laying the cornerstone of what it calls “a broad-ranging photo strategy.” Users can upload, download, store, edit and print high-resolution photos from the site, which uses technology developed by partner Hewlett-Packard and Webshots, a company just acquired by Excite@Home.

“Excite is giddy at the thought of getting into this space,” said Faulkner Hunter, vice president of business development for the Redwood City, Calif.-based broadband ISP and portal. Viewing photos online gives new users a reason to go on the Web, just as e-mail has in the past few years, he added.

The Excite Photo Center acts as a two-way conduit. Users can upload their own digital pictures, then store them in albums

for others to see on the Web site; they can't download them. However, users are able to download free, professional digital photos for use as screen savers and wallpaper.

The professional images are provided by San Diego-based Webshots, which also offers free photographic screen-savers and digital greeting cards. Excite@Home says visitors download 25 million images from Webshots each month. Webshots' software, called the Webshots Client, is required to upload and download photos on Excite Photo Center.

To make more images available, Excite@Home also entered into a strategic relationship with Worldprints, Boulder,

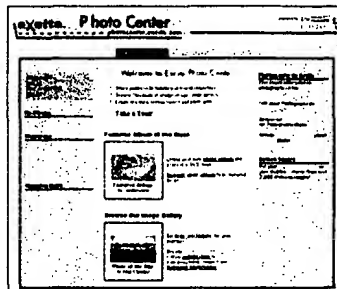
Colo., a digital photo stock house that has exclusive online distribution rights to the *National Geographic* photography collection. Worldprints also sells posters, giving the site e-commerce potential.

The Photo Center uses Hewlett-Packard's Cartogra Digital Imaging Infrastructure. The alliance could spur sales of the Palo Alto, Calif.-based company's color printers and toner.

The service launches at a time when prices for digital cameras are falling, and the holiday shopping season is expected to put cameras into the hands of many new users.

According to InfoTrends Research Group of Boston, nearly 100 million people will view personal photo albums online next year.

InfoTrends predicts that digital camera sales in North America will grow at 36 percent annually through 2003, jumping from 3.6 million units sold in 1990 to 6 million in 2003. ■



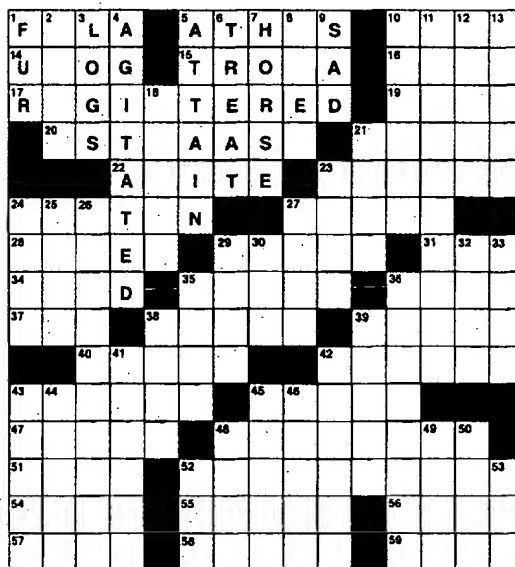
Excite Photo Center lets people share their photos online.

**pogo.com**

ACROSS

17. pogo.com has 5 MM \_\_\_\_\_ USERS.

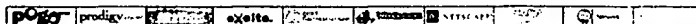
ANSWER: REGISTERED



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Through our collection of online games like chess, trivia and bingo, we've attracted 5 million registered users\*: 47% of our users are female,\*\* 78% are 18-49 years old,\*\* 73% play from home,\*\* and 54% buy products online.\*\*\* Ahh, stats. Next week, flow charts!

pogo.com provides games for the following sites:



[www.pogo.com/advertise](http://www.pogo.com/advertise) NEW YORK 212-324-4550 LOS ANGELES 818-539-2266 SAN FRANCISCO 415-778-7319 [ads@pogo.com](mailto:ads@pogo.com)

# Digital photos

A digital camera gives you many new ways to work with your pictures. Here's a rundown of the alternatives.

**U**sing a digital camera lets you make prints, send pictures to friends and family by e-mail, and store the images on your computer or on a disc. Photo-handling services are available, but if you learn to use the image-processing software that comes with your camera, you'll have the control over photos that film users envy.

This year, according to one bullish industry estimate, Americans will generate 5.4 billion prints from digital files. If true, that would be about one print in seven.

Taking those photos is the easy part. In order to do anything with the images—make prints, send them with e-mail, and so on—you must first download them to your computer. This report provides a brief guide to the software you'll likely use and the growing network of stores and web sites that can also handle your film or digital images.

## IN THE DIGITAL DARKROOM

Digital cameras come with versatile image-processing software, such as Adobe Photo-Deluxe, MGI PhotoSuite, Microsoft Picture It, and Ulead PhotoImpact.

These packages excel at letting you touch up photos. There's often an instant-fix option to improve brightness and contrast or adjust the tint. An additional tool lets you fix red-eye in flash pictures.

You can also crop photos, put them in ovals and other distinctive shapes, or straighten images tilted off horizontal. You can create a mirror image or turn a photo upside-down. And you can reduce a photo's resolution, making the file small enough for an e-mail attachment.

Most software packages also give you a palette of creative tools. You can, for example, turn a color photo into a black-and-white print or into something resembling a painting, brush strokes and all.

With a steady hand, you can outline a section of one image, then put it into another

photo. You can eliminate distracting details and remove skin blemishes and other imperfections. There are also ways to remove scratches and other flaws from old photos you've scanned, darken or lighten specific areas for emphasis, or throw a background into soft focus.

Most image-handling software makes it easy to print images various ways—putting multiple copies on the same sheet, printing on a T-shirt transfer, or sending the photo to a web site.

If you dislike the software supplied with your digital camera, you can buy one of the other packages for about \$50. In the course of testing cameras, we've seen Adobe Photo-Deluxe become popular; it's supplied with many of the higher-rated cameras.

## HELP WITH IMAGE HANDLING

A growing roster of image-handling services and web sites will post your work on the Internet for you, let you share snapshots in online albums or through e-mail, and make traditional color prints. Some services let your e-mail recipients also order reprints printed from your original files.

Seattle FilmWorks, one of the biggest mail-order film processors, reflects the trend. After 22 years, the company has reinvented itself as PhotoWorks. As one company executive explained it, "We're an online photo-service company that has a photofinishing lab in-house." And, with a claimed 125 million photos stored on its computers, the executive says PhotoWorks aims to be "the digital shoebox for the customer."

In these dot-com times, companies

come and go quickly, and specific services appear or vanish as business plans are refined. Nevertheless, it's possible to map the kinds of services available now.

## SCANNED IMAGES

More and more, photofinishers don't care whether your snapshots exist as files from a digital camera or as files you create by scanning conventional film negatives or prints. Drug and discount chains offer scanning services when you bring in film for developing. Depending on the service, you can have images stored on a floppy diskette, Picture CD, Photo CD, or uploaded to a web site.

Negatives may be scanned at 1,536x1,024 pixels, equivalent to output from a 1.5-megapixel digital camera. That's sufficient to produce a sharp 5x7-inch print, says Anthony Sanzio, a Kodak spokesman. Our own tests back that up. We've found that even 8x10 prints are often decent.

If you have a scanner (they start at less than \$100), you can also transform film prints into digital files that you can either manipulate and store on your computer or upload to one of many online services.

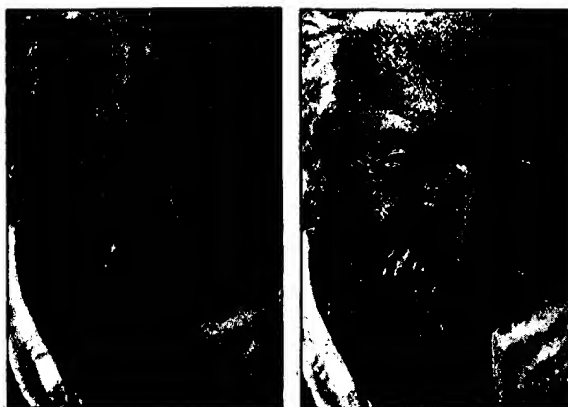
## IMAGES ON DISC

When you have film processed, whether online or at a walk-in lab, you can often order a CD containing all the snapshots. Picture CDs, around \$5 or \$10 per roll, have a resolution of 1,536x1,024 pixels. Photo CDs, a more professional format, use 3,072x2,048 pixels for superb, richly detailed enlargements. Photo CDs cost \$20 to \$30.

## PHOTO KIOSKS

Kodak and Fuji have installed thousands of freestanding photo-handling kiosks in pharmacies, one-hour photo labs, and other stores. They're a handy way for you to make custom prints on the spot, without using your own computer.

**RETOUCHING 2000** Image-editing software, which is bundled with digital cameras or available separately, lets you make a variety of useful enhancements and alterations. The portrait at right has been improved in brightness and contrast, and some wrinkles have been removed from the face. Below, some skiers in the left-hand photo have been "erased" to achieve the desired effect.



Kodak's Picture Maker kiosks typify the hardware. They have a TV-style screen that displays the photo and changes you make to it, along with controls that let you choose the picture size and layout. The kiosks can read the memory card from a digital camera, a Picture CD or Photo CD, or a diskette; they also have a built-in scanner, so you can make reprints from an existing picture, a print from a diskette, or a slide. You can crop and enlarge the image or enhance it by changing the brightness or color balance, or by correcting red-eye.

A built-in thermal dye-sublimation printer delivers prints quickly; they're more permanent than inkjet output. In the future, Kodak says, its kiosks will be networked, allowing users to e-mail images and route prints to kiosks elsewhere, where proud grandparents might come, tap keys, and get a new grandchild's photo.

Prints made at a kiosk range in price from \$6 to \$12 per sheet.

#### PHOTOS ONLINE

Kodak and PhotoWorks are among the biggest online services, along with more recent Internet start-ups like Ememories.com, Ofoto.com, and Shutterfly.com. Some old-line photofinishers, including Mystic Color Lab, York, and Signature, now have a presence on the web. America Online offers its "You've Got Pictures" service with Kodak. The CVS pharmacy chain, among others,

also partners with Kodak for its online service. Photofinishing sites offer a wide range of services. They may also imprint mugs, tote bags, and such with your images; store your images on their servers; and create digital versions of film snapshots when they process the original rolls. Clearinghouse sites offer useful tips and pointers, links to other sites, and equipment reviews. Photohighway's "Price Patrol" keeps track of the online processors and regularly updates their costs.

Online companies price reprints and enlargements to be competitive with walk-in stores. Expect to pay 25 to 50 cents for a 4x6; \$1 to \$2 for a 5x7. (We've found that a do-it-yourself 8x10 inkjet print costs about \$1.) The processors use regular silver halide paper and chemicals, as when printing from negatives. So reprints should last a long time; inkjet prints can fade quickly (see page 23).

#### Two caveats:

- ▶ If you upload images from a digital camera or a scanner, some processors may reduce the resolution in the original if your file does not fit their procedures. In that case, your prints might not look as crisp as you expect. Be sure the processor will use the resolution you provide.

- ▶ If you upload an image that doesn't fit standard frame sizes—a long, skinny panorama, say, or a square shot—be sure to indicate how you want it printed. Some sites

let you check a box to say that you want the whole image (no cropping), even if it means large, uneven margins; others may automatically crop an image's sides to force it into the frame, eliminating picture areas.

#### Choices in phot processors:

Ememories: [www.ememories.com](http://www.ememories.com)  
 EzPrints: [www.ezprints.com](http://www.ezprints.com)  
 Kodak: [www.kodak.com](http://www.kodak.com)  
 Ofoto: [www.ofoto.com](http://www.ofoto.com)  
 PhotoWorks: [www.photoworks.com](http://www.photoworks.com)  
 Shutterfly: [www.shutterfly.com](http://www.shutterfly.com)  
 Snapfish: [www.snapfish.com](http://www.snapfish.com)  
**Choices in clearinghouses:**  
[www.pcphotoforum.com](http://www.pcphotoforum.com)  
[www.photohighway.com](http://www.photohighway.com)

#### ONLINE SHARING

Some online photo sites are happy to store your images digitally and let you caption shots, arrange them into albums, send e-mail "postcards," and so on. Online storage can be a good backup even if you store the images on your own computer. And devotees of eBay and other online auctions need a place on the web where they can park photos of their wares.

But there are limits to the amount of storage offered, on how long shots stay up (perhaps just 30 days or until you stop being an active customer), or on the image resolution (to reduce storage needs).

Some sites exist largely for sharing, or as some say, building a photo "community." GatherRound.com, from the microprocessor giant Intel, HP's Cartogra.com, and PhotoPoint.com are examples. HP's site, for instance, gives members 15 megabytes (MB) of online image storage. The site also lets you buy T-shirts, mugs, and other items imprinted with your photos. And it includes how-to advice and useful links. Many Internet service providers also supply subscribers with online storage.

If you use a photo-processing company to store photos online, be aware that you may not be able to get at the files. Ofoto.com, for instance, will make reprints, but users cannot access image files; you will receive your negatives when the company processes your film.

If you avail yourself of online storage, be clear on the privacy policy. Some sites use passwords for album access, and you can share the password with family and friends. Others have open areas, where strangers can see your snapshots; you may not want that.

#### Choices in photo-sharing sites:

HP's Cartogra: [www.cartogra.com](http://www.cartogra.com)  
 Intel's GatherRound: [www.gatherround.com](http://www.gatherround.com)  
 Photo Point: [www.photopoint.com](http://www.photopoint.com)